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BIG SOUTH FORK
NATIONAL RIVER AND RECREATION AREA
KENTUCKY AND TENNESSEE

REPORT ON BLUE HERON MINING COMMUNITY

DEPARTMENT OF THE ARMY
NASHVILLE DISTRICT, CORPS OF ENGINEERS
NASHVILLE, TENNESSEE

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SECTION ONE

SYLLABUS

The purpose of this study is to determine the most appropriate use of the Blue Heron Mining Community site, as part of the Big South Fork National River and Recreation Area. Alternative plans are formulated for the site and the best plan is selected. The selected plan is expanded into a detailed time based strategy for redeveloping the Blue Heron Mining Community in a manner that makes the site safe for public use and maximizes recreational and interpretive potential of the site. The selected plan is formulated in such a manner that the wild and scenic character of the gorge is preserved, the remaining structures on the site are preserved and the operation of the redeveloped facilities of the site is economically feasible.

Four alternative plans are formulated. Alternative I, which recommends no action, is rejected due to the safety hazards which currently make the site unsuitable for public use. Alternative II, which recommends safety measures only, is rejected in that this alternative would allow the existing facilities to continue to deteriorate. Alternative III, which recommends safety measures and preservation of the existing facilities, is chosen as Phase I of the recommended plan. Alternative IV, which recommends a redevelopment of the site for recreational and interpretive uses, is chosen as Phase II of the recommended plan.

The recommended plan is summarized as follows.

Phase I

Phase I covers the period prior to the opening of the Big South Fork National River and Recreation Area. In general, Phase I consists of sealing and fencing the

* In certain sections of this report an abbreviated term "National Area" has been substituted for the full name "Big South Fork National River and Recreation Area.

open mines; clearing the site of scrap material; fencing the trestle over the river, removing the old ties and sand blasting and painting the metal structure; fencing and repairing the trestle over Roaring Paunch Creek, sand blasting and painting the metal structure; repairing the tipple exterior; and constructing a parking area. The cost to establish Phase I is estimated to be approximately $75,000 exclusive of land cost. Maintenance and operation costs for Phase I are small. They consist primarily of repairs to correct vandalism that might occur to the tipple.

Phase II

Phase II is to be scheduled for completion at the time of the opening of the Big South Fork National River and Recreation Area. Phase II consists of improving the interior of the tipple for a walking tour; converting the trestle over the river into a foot bridge to the west bank and into the tipple; constructing a mining village to include several houses, church, school, company store, and museum; constructing a tram way from the parking area to the tipple; and constructing a noture trail system. Adding concessionaires is optional. The initial cost of Phase II is estimated to be approximately $525,000. Phase II will have an annual operation and maintenance cost of approximately $57,000 and will generate a "most likely" $75,000 in revenue, thereby having a net revenue potential of about $18,000.

Management

Management of the Blue Heron project will be conducted under the plans being developed for the National Area.

SECTION TWO

PURPOSE AND AUTHORITY

The purpose of this study is to determine the most appropriate use of the Blue Heron Mining Community site, as part of the Big South Fork National River and Recreation Area. This research is conducted for the U.S. Army Corps Engineers, Nashville District, by L.D.A., Inc., and is authorized by Public Law 93-251, Water Resources Development Act.of 1974.

The interpretive and recreational potential of the Blue Heron site is examined as a part of this study. Alternative plans of action for the site are formulated and the economic and political feasibility of these alternatives is determined. The most appropriate alternative is selected and is expanded into a feasible plan of action for the Blue Heron site. The economic and management aspects of the selected plan are examined, a land plan for the site is prepared, and a time based phasing schedule for the accomplishment of the plan is presented.

SECTION THREE

ASSUMPTIONS

Five assumptions are made as a basis for this research. They are as follows:

1. The Big South Fork National River and Recreation Area will be developed by the U.S. Army Corps of Engineers and managed by the National Park Service. and will open to the public in the early 1980's.
2. The visitation projections prepared by Eric Hill Associates of Atlanta, Georgia. for the Big South Fork National River and Recreation Area are reasonably correct.
3. State Route 742, the road into the Blue Heron site, will be widened and paved regardless of what development is recommended in this report.
4. The Blue Heron Mining Community facility will be operated in a competent and professional manner.
5. All cost data are stated in 1975 dollars and no attempt is made to adjust these costs for inflation's impact over the coming years.

SECTION FOUR

SCOPE OF THE STUDY

TYPES OF ANALYSIS

The Blue Heron Mining Community restoration study incorporates elements of several types of planning and economic studies. A land capability study is conducted as a part of this research. The topography, vegetation, animal life, waterways, and man-made features of the site are analyzed. The eco-systems and the environmental sensitivity of the site are considered.

Elements of a market study are included in this research. Comparable projects are examined for evidence of market support of various uses. Visitation projections are prepared for the site by season to determine the demand for specific uses at the Blue Heron site.

An attitudinal survey was conducted to measure the opinions of the general public as well as specific groups such as local officials, state level officials, environmentalists, local residents, and tourists. The attitudes and opinions gathered through the survey provide a measure of support (or opposition) for the project, and the survey provides an input medium for those who are knowledgeable about coal mining life, the coal industry, and the Eastern Kentucky area. Additional elements of an attitudinal study are incorporated in this research through the many interviews which were conducted with involved agencies, local officials, management of comparable projects, and numerous other groups and individuals.

An economic feasibility study is part of this research. The data collected through the land capability study, attitudinal surveys, interviews and market study are used as input to determine possible alternative plans for the site. Estimates are prepared for the

costs of site improvements for each alternative plan and management and operation costs of each plan. Estimates of the gross revenues generated under each plan are made and the net costs to establish and operate a project are estimated for each plan. The impact of each plan on the local economy is examined.

The elements of a management study are also present in this research. The operation and management strategy of the selected plan are discussed and management problems are pointed out. Management options within the selected plan are set forth.

RESEARCH DESIGN

The procedure by which the alternative plans are generated is reflected in Figure 1 . Six major sources of information are utilized in this process. The field survey of the site, prior studies of the Big South Fork National Area, maps of the area. and interviews with various groups are used as input to determine the characteristics of the Blue Heron site. These characteristics, such as location. access and topography. largely determine the recreational and interpretive potential of the site as well as the safety factors involved in the site's use by the public. The limitations on the site's use are a function of the characteristics of the site the opinions of the public and involved agencies. and the restrictions set forth in Public Law 93-251. The limitations on the uses of the site, together with the safety factors involved in the site's use by the public form the parameters within which the recreational and interpretive potential of the site may be developed. The various processes through which this potential may be developed give rise to the possible alternative plans for the Blue Heron site.

Figure 1

Decision Process in the Generation of Alternative Plans

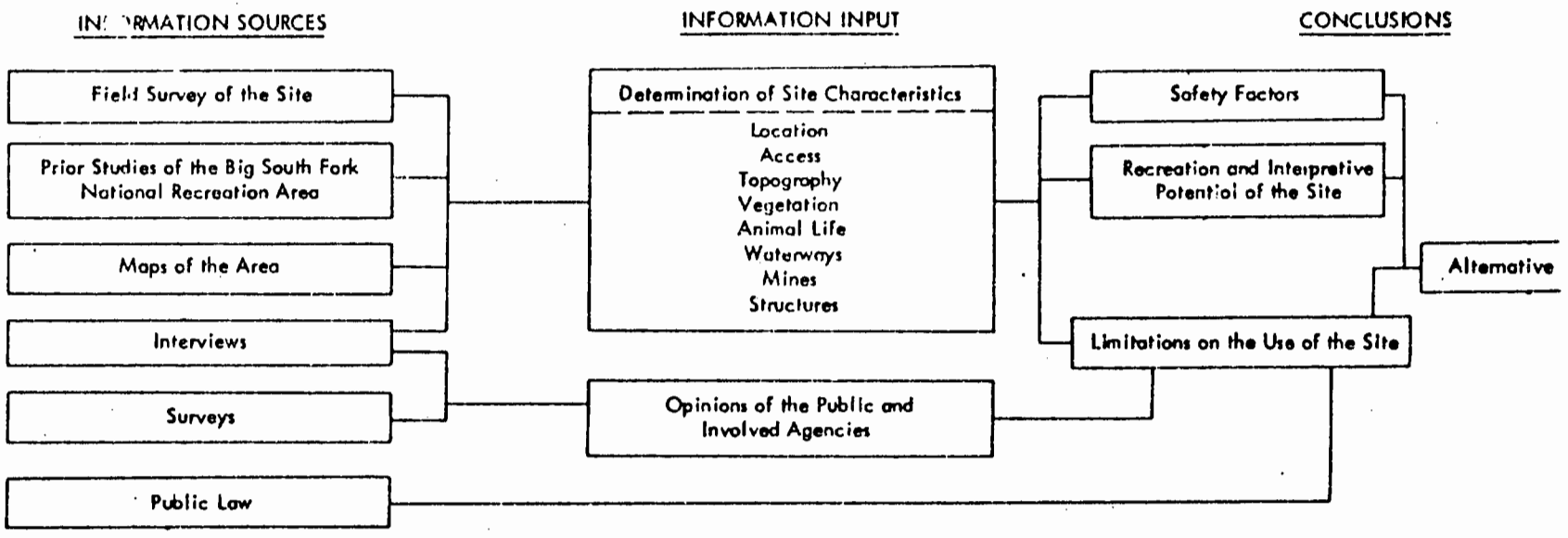


Figure 2, on the following page, reflects the procedure used in selecting one alternative plan as the "best plan". Five major factors come into play in the selection of the best plan. They are the opinions of the public and involved agencies, the National Park Service's opinions and budgetary restraints, the impact of each plan on the local economy, the safety factors involved in the site's use by the public, and the net cost to establish and operate a project under each alternative. The selected plan is that plan which best meets the following criteria.

> The selected plan has support among the public and involved agencies, makes the site safe for public use, can be operated within the National Park Services budgetary restraints, has a favorable impact on the local economy and is efficient in terms of the net costs to establish and operate.

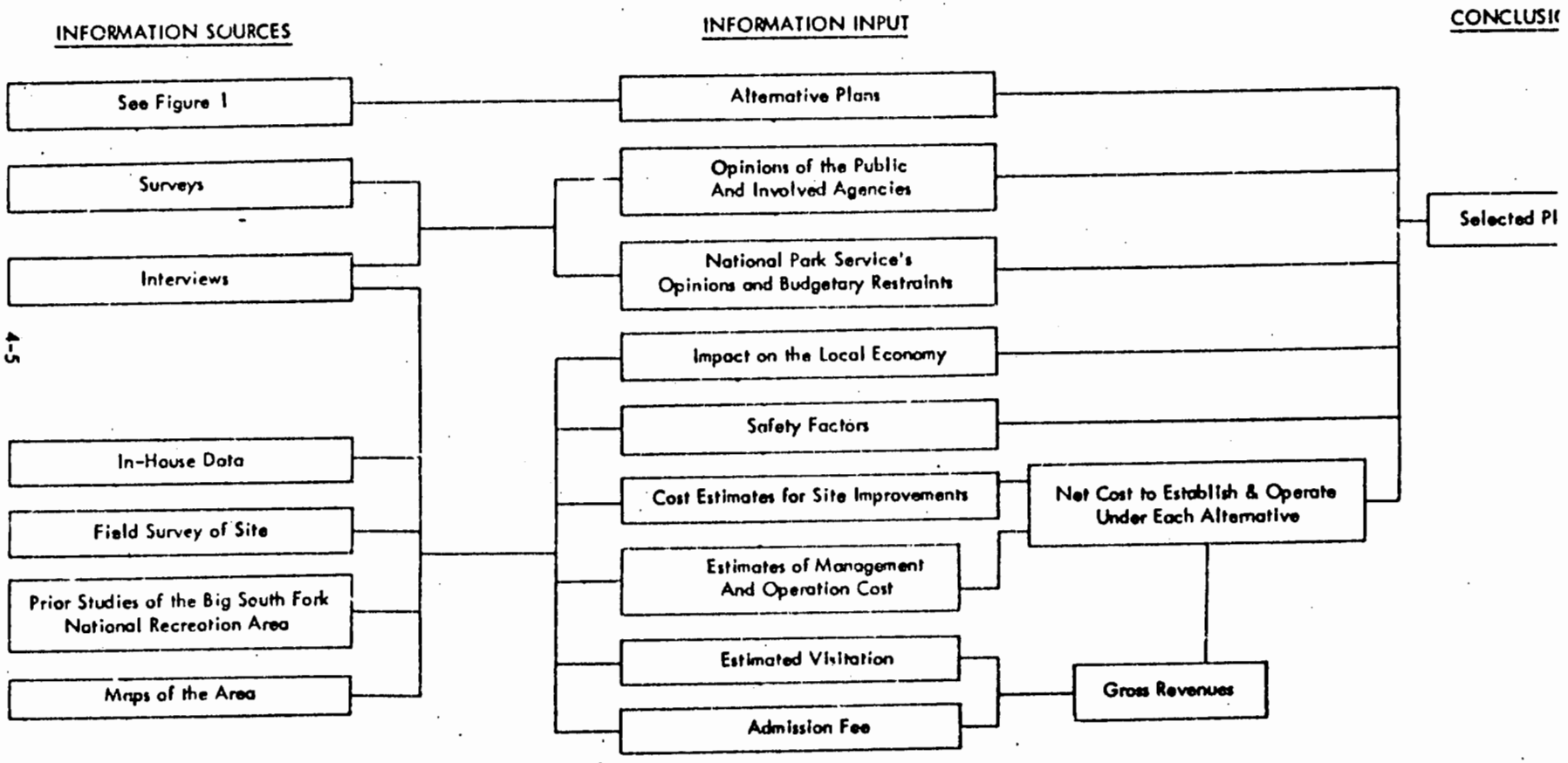
STUDY LIMITATIONS

A multi-discipline study team conducted this research. Included on the team are planners, appraisers, an architect, an economist, an engineer and several general researchers.

Two on-site surveys have been conducted by team members; more than forty individuals have been interviewed; and approximately 600 individuals have been surveyed. All major aspects of the development of the Blue Heron site as a public use area have been examined, and a broad range of development alternatives have been evaluated. While the Blue Heron study has been very thorough, certain study limitations do exist.

Figure 2

Decision Process in the Selection of a Plan



Maps showing the exact location of the drift mines in the Blue Heron area were not available during the cost estimates phase of the study. The study team relied on interviews with an official of Stearns Coal and Lumber Company and previous studies of the Big South Fork area for a count of the mines in the area. This made the cost estimates of sealing and fencing the mines imprecise. 1/

The number of original photographs of the Blue Heron Mining Community is very limited, and there was never a land plan of the original community. The study team relied primarily on data collected on the site, interviews and previous studies of the area for information on the original location and architecture of the structures. However, during the latter phases of the study, several possible sources of photographs and documents on the Blue Heron community were found. 2/ In that the purpose of this research is to develop a wide range of alternative plans and select the best plan, very detailed historical information is not highly pertinent to the study. Should development of a restored coal community be made, then the collection of detailed historical information would be appropriate.

1/ The Kentucky Department of Mines and Minerals has certified maps on file which were submitted by Stearns Coal and Lumber Company. A release from Stearns Coal and Lumber Company is required by the Kentucky Department of Mines and Minerals prior to sending out copies of these maps.

2/ Mr. L.C. Bruce, Lexington, Kentucky, is reported to have an extensive file of old photographs. Anne McKinnon, of the Louisville Courrier Journal, has conducted research on the Blue Heron community, and may have historical information.

In general, the cost estimates for site improvements are not highly precise. Due to the isolated nature of the site, the contractors interviewed for cost information were required to respond without the benefit of viewing the site and its remaining structures. However, the "cost spread" between alternatives is much larger than the possible variance of cost for a given alternative. Therefore, the inaccurate nature of the estimates is not a serious limitation.

The information gathered through the attitudinal survey has some minor limitations. Many respondents were not familiar with the Blue Heron site and relied on the brief information provided in the survey. In addition, several sub-samples (groups) did not have a high enough response rate to make conclusions possible about attitudes and opinions within certain groups. The lack of familiarity with the site and the low response rate of several groups is considered to be a very minor limitation.

The last limitation relates to the projected visitations to the site. These projections are based on projections for the National Area prepared by Eric Hill Associates in June, 1975, and revised later in 1975. While the conclusions drawn by Eric Hill Associates appear to be very reasonable, should they prove inaccurate the projected visitation to the Blue Heron site would also be inaccurate. Projected visitation plays a key role in the selection of the best plan. Should the National Area prove to be less popular than expected, the recommendations of this research would be somewhat different. However, it is recognized that this possibility exists and the recommendations have been tailored accordingly.

SECTION FIVE

STUDY PARTICIPANTS AND COORDINATION

SURVEY PARTICIPANTS

Approximately 700 surveys were mailed to individuals and organizations comprising 15 categories of respondents. These categories are as follows.

Major Coal Producers

Surveys were sent to approximately 85 major coal companies in Kentucky, Illinois, Virginia, Indiana, Pennsylvania, Ohio, Tennessee and West Virginia. The opinions of coal company officials are held to be valuable in that these officials have a considerable knowledge of the coal industry and its history. In addition, these individuals represent a significant potential user group for the Blue Heron restoration project. The major coal producers were also asked if they had items which could be included in a coal museum at Blue Heron.

Local Coal Companies

Approximately 30 surveys were mailed to local coal companies in the Eastern Kentucky/Tennessee area. In addition to having knowledge of the coal industry and its history, officials of these companies provide a local perspective on the Blue Heron project. Many of these officials are familiar with the history of the Blue Heron Mining Community and similar communities in the area.

State Officials

Twenty-two State Senators and Congressmen from the Eastern Kentucky/Tennessee area as well as the Governors of the two states were surveyed. These individuals provide

a profile of state level political opinions and potential state level support for the Blue Heron project.

State and Federal Agencies and Organizations

Approximately 30 state and federal agencies and organizations with functions that relate to the Blue Heron project were surveyed to obtain a profile of the position of relevant agencies and the opinions of professionals associated with these agencies.

Local and County Officials

Sixty-two officials on the county and municipal level were surveyed to measure the local political climate for the Blue Heron project and to obtain general input on local attitudes and opinions on the best uses for the site.

Conservation Groups

Surveys were mailed to representatives of approximately 30 conservation groups. In addition, a package of surveys (35) was mailed to the Tennessee Citizens for Wilderness Planning with a request to distribute the surveys to concerned conservation groups. Numerous conservation groups have been involved in the planning of the National Area and their familiarity with the ecological aspects of the area is considered a valuable information resource. In addition, the opinions of these groups represent a segment of society whose viewpoint should be incorporated into the planning of the Blue Heron site.

Motels and Lodges (Travelers)

Approximately 200 surveys were mailed to 41 motels and lodges in the area of the Blue Heron site to be distributed to travelers in the area. The responses of the tourists in the area provide valuable market preference data to be used in determining which uses will have market support.

Chamber of Commerce

Thirteen Chambers of Commerce in the eastern Kentucky/Tennessee area were surveyed to gain the insights of individuals who are familiar with the area and with the visitor patterns and preferences in the area.

National Park Service

Twenty surveys were sent to officials of the National Park Service. In that the National Park Service will manage the Blue Heron project, the attitudes and opinions of National Park Service officials are considered to be of great importance to the planning of alternatives for development and the selection of a plan.

United States Officials

Twenty-two surveys were mailed to U.S. Senators and Congressmen from the eastern Kentucky/Tennessee area to sample the political climate for the restoration project and to gauge potential support on the national level.

Mining Unions and United Mine Workers Local Officials

Approximately 50 surveys were mailed to local mining union officials and to national and local offices of mining unions. The attitudes and opinions of miners are

considered to be valuable in planning the Blue Heron project. These individuals can provide insight into the true nature of coal communities. Miners also comprise a very sizable potential user group for the project.[1]

Other Groups

In addition to the groups previously mentioned, 30 additional surveys were mailed to local newspapers, operators or comparable restoration projects, operators of amphitheaters and other individuals and organizations not falling within specific categories.

[1] Surveying this segment of the population was largely made possible by Mr. Harry Patrick, National Treasurer of the United Mine Workers, who compiled a lengthly mailing list of local union officials for use in the surveys.

THE SURVEY

The Blue Heron Attitudinal Survey and tabulated results are included in this report as Appendix A. The survey is designed to accomplish the following goals:

- Estimate the portions of the population from which the survey sample is drawn that are in favor of a restoration project at the Blue Heron site; that oppose a restoration project at the Blue Heron site; and that have no opinion.
- Sample public opinion on the general orientations, theme, and period which are most appropriate for a restoration project at the Blue Heron site.
- Sample public opinion on specific uses and facilities which can be offered at the Blue Heron site.
- Determine areas of general agreement and areas of controversy in the population and between specific groups (sub-samples).
- Estimate the degree of interest in the project on the part of the general population and each group sampled (sub-sample).
- Solicit comments.

A cover letter accompanied each survey to explain the purpose of the survey and provide a brief description of the Blue Heron Mining Community. Following the letter is a series of 20 multiple choice questions and a space for the respondents name, address, and comments. Question 1 is designed to determine the degree of support and opposition to the project. Questions 2, 3, and 4 are designed to sample the public's opinions as to the most appropriate character of the project in terms of orientation, theme and period. Questions 5 through 20 are designed to sample public opinion on specific uses and facilities which can be offered at the Blue Heron site. In addition, the pattern of responses to Questions 5 through 20 gives further insight into the most appropriate orientation and theme of the project, and points up areas of general agreement and areas

of controversy in the population and between groups. The comment section is designed to provide the respondent with the opportunity to render additional opinions, elaborate on his responses and offer any information he so desires.

SUMMARY OF SURVEY RESULTS

The results of the Blue Heron Attitudinal Survey are reflected in the "Survey Results" Table of Appendix A. Of the 655 surveys mailed out, 607 were delivered and 112 responses were received during the 30 day period following mailing. 1/ This is a response rate of 18 per cent. The groups showing the best response rate are state and federal agencies and organizations (42%), conservationists (50%), and the National Park Service (52%). Among the groups showing the lowest response rate are the major coal producers (14%), motel and lodge operators and tourists (8%), and U.S. officials from Kentucky and Tennessee (14%).

Eighty-one per cent of the respondents feel that the Blue Heron Mining Community should be restored as a public use area, 12 per cent are opposed and 7 per cent have no opinion. Support for the project is strongest among motel operators and tourists (94%), mining union officials from the area (92%) and local coal companies (88%). Opposition to the restoration project is strongest among the National Park Service (36% opposed) conservationists (20% opposed) and state and federal agencies and organizations (15%

1/ The cut off date for scoring was 30 days from mailing.

opposed). It is significant to note that the majority of the respondents in each group are in favor of the restoration project.

Sixty two per cent of the respondents feel that the project's orientation should be an educational and recreational mix, and 61 per cent feel that the project should emphasize the architectural, cultural and social aspects of coal mining and/or the procedures used in mining and processing coal. This pattern runs throughout all groups surveyed except state and federal agencies and organizations and local officials who feel that some emphasis should be placed on the historical aspects of the settlement and growth of Eastern Kentucky and Tennessee. The majority of the respondents feel that no specific period should be emphasized in the restoration project. This is fairly characteristic of all groups.

The following uses had the strongest support--a walking tour of a restored mining community (83%); a tour of a restored or reconstructed mine (83%); a museum (83%); and a ride on a small tram similar to the ones used to transport miners into the mines (80%). Very little controversy exists on these uses. The vast majority of every group surveyed favors a walking tour of a restored mining community and a tram ride. With the exception of the National Park Service, all groups strongly favor a mine tour, and with the exception of conservationists, all groups strongly favor a museum. The majority of the respondents feel that the theme of the museum should be "the story of coal". However, the mining union officials and the National Park Service show strong support for "the story of energy production and use" as a theme.

Seventy per cent or more of the respondents show support for the following uses--a narrated tour of an operating coal tipple (75%); nature trails with interpretive markings (78%); a ride on an authentic train of the period (70%); camping facilities (72%); and a restaurant (76%). A slight preference was shown for camping facilities with drive-in tent spaces and recreation vehicle spaces. Somewhat less preference was shown for back pack primitive areas.

On the question of a restaurant, the most popular theme is mining community cafe/saloon (41%) and country food-family style (34%).[1/] Least preference is shown for a fish camp (2%) and fast food service with no theme (7%).

There is no unified opinion on these uses. Conservationists and the National Park Service show only weak support for a tipple tour (50% in favor). Only 50 per cent of the state and federal agencies and organizations showed support for nature trails. Only 46 per cent of the state and federal agencies and organizations and 50 per cent of the conservationists are in favor of a train ride. Only 40 per cent of the conservationists favor camping facilities, and only 30 per cent of the conservationists and National Park Service respondents favor a restaurant.

A clear lack of support is shown for the following uses--amphitheater (36% in favor), lodge (54% in favor) and rental cottages (52% in favor). Local officials and motel operators and tourists show the most support for an amphitheater with 75% and 50% in favor, respectively. A clear lack of support is shown by the other groups with conservationists and the National Park Service showing the most opposition--60% and 50% opposed respectively.

[1/] No alcoholic beverages to be served.

Fairly strong support is shown for a lodge by major coal producers (70%), local officials (83%) and mining union officials (82%). Clear opposition is shown by conservationists (60% opposed) and the National Park Service (80% opposed). This same pattern is shown for rental cottages.

The topics which appear to be the most popular as subjects of exhibits or tours are the procedures used in removing and processing coal, cultural aspects of mining community life, geological aspects of coal, and hazards and safety measures in coal mining. The least popular topics are the historical development of mining unions, migration of immigrants to the Appalachian coal fields and the historical aspects of railroad construction into the Cumberland Plateau.

INTERVIEWS

Interviewees

Approximately 40 individuals were interviewed in the course of this research.

Purpose of Interviews

These interviews were conducted for a variety of purposes that are summarized as follows:

- Determine the National Park Service's position of the restoration of Blue Heron.
- Determine the National Park Service's strategy for the management of project.
- Determine the interpretive and recreational value of the Blue Heron site.
- Determine the environmental problems connected with the restoration of Blue Heron.

- Determine the safety problems connected with the development of the Blue Heron site as a public use area.

- Determine specific problems connected with the various uses which are possible at the Blue Heron site.

- Collect construction cost data and operation data for the development alternatives for the Blue Heron site.

- Determine which agencies and organizations should be included in the planning process of the project.

- Collect data on the offerings, construction and operation costs, arrangement strategy and visitation level of comparable projects.

- Collect historical information of the Blue Heron Mining Community.

- Collect information on current and projected tourist visitation levels and patterns in the general area of Blue Heron.

INTERVIEW FINDINGS

The information collected through the many interviews conducted as a part of this research is reflected throughout this document. While no effort is made here to offer a detailed account of each interview, the salient points of these interviews as they met the purposes outlined previously are provided in the following paragraphs:

Objective:

- Determine the National Park Service's position of the restoration of Blue Heron.

Findings:

- The National Park Service views the Blue Heron restoration project within a general rating system for determining the significance of any given project or site. This system categorizes a project or site as being of national significance, state and regional significance, or local significance. Priority is placed upon projects of national significance. Projects deemed to be primarily of state and regional significance

usually are not recommended for National Park Service operation. The significance of a given project or site is viewed in terms of that project's or site's historical and/or recreational value. The staff of the National Park Service emphasized that in their opinion the historical and recreational value of the Blue Heron site has not been determined, but that it appears that the site has only local significance. This, of course, places the project in a low priority position.

On the basis of the Blue Heron site's priority position, the National Park Service feels that appropriate budgetary expenditures could be made only for the stabilization of the existing structures on the site and the preservation of the site's natural resources. Further, the National Park Service feels that the determination of the Blue Heron site's historical and recreational significance will clarify the preservation/restoration options which are available for the site and suggest the most appropriate option.

The employees of the National Park Service view the Blue Heron Mining Community as being a low priority item within their rating system for historical significance. They feel that the site is appropriate for day use only and they are not desirous of assuming the responsibilities for the operation of a lodge on the site. (National Park Service procedure is to operate lodges on a concession basis.) The Staff was of the opinion that the budgetary condition of the National Park Service at the present time does not favor the operation of an expensive project of this type. In addition, the National Park Service Staff generally do not favor the construction of a parkway type road into the Blue Heron site, but would prefer a smaller road, eigher paved or gravel surface, perhaps only one way with pull outs, into the site in order to protect natural values of the gorge.

In general, it appears that the National Park Service Staff reservations concerning a large restoration project at the Blue Heron site are based on their perception of the site's lack of national significance and the fact that a large project will require large budgetary allocations for management. These budgetary objections may possibly be overcome if the Blue Heron project is planned in such a manner that portions can be operated by a concessioner on a profit basis. The lack of national significance may be overcome if the project is of sufficient magnitude to have a national draw and emphasizes the interpretation of topics which have national significance, such as the geolagical aspects of coal or the cultural aspects of mining community life.

Objective:

Determine the National Park Service's strategy for the management of project.

Findings:

A conference with National Park Service Staff members revealed that the National Park Service will develop a management strategy once the final plan has been selected. However, certain general conclusions concerning management were reached. The National Park Service will be responsible for the management of the entire Blue Heron project, but probably would utilize concessions for such facilities as a lodge.

The National Park Service Staff stated that the National Park Service would be responsible for the cost of operating the project other than concessioner contracts for certain facilities.

Objective:

Determine the interpretive and recreational value of the Blue Heron site.

Findings:

A telephone conference with members of Coastal Zone Resources Corporation revealed the following insights.

Coastal Zone Resources Corporation feels that the natural characteristics of the Blue Heron site provide some interpretive potential. The general area of the site has a number of "eco-systems" such as the aquatic system of the river and streams, the flood plain system, and the slope system. These systems offer some opportunity for nature trails with descriptive markings. However, it was mentioned that the terrain of the Blue Heron area is not uncommon and is therefore of limited interpretive value. In addition to nature trails, it was mentioned that there may be remains of Indian Villages in the Blue Heron area and these sites may have archeological importance. If such sites actually do exist, they may have interpretive potential.

The Staff of Coastal Zone Resources Corporation feel that the Blue Heron terrain offers recreational opportunity in the form of canoeing and rock climbing. The rapids in the Devil's Jump area provide

recreational opportunities for the skilled canoeist. while the smoother water downstream is suitable for the novice. The cliff structures in the Devil's Jump area should be attractive to the moderately skilled rock climber.

An interview was conducted with Mr. Rick Heroid, assistant to Senator Howard Baker to determine Senator Baker's goals for the Blue Heron Mining Community to determine the uses of the site which he feels are appropriate and to gain attitudinal input on specific uses such as a lodge.

Mr. Heroid stated that in his opinion Senator Baker has two general goals for the National Area and the Blue Heron site. One goal is that of conservation. Senator Baker wishes to preserve the gorge and its general area for the recreational enjoyment of a wide range of people. The second goal is that of economic growth. Senator Baker feels that the general area has very limited industrial potential but has strong recreational potential. By capitalizing on this recreational potential, a favorable economic impact may be affected. Senator Baker's desires for the Blue Heron site fall within the parameters set by these general goals.

Mr. Heraid stated that Senator Baker had no specific design goals for the Blue Heron site. However, his conceptual goal for the site is that it be used to portray the community life of the people who worked and lived in the coal communities of Kentucky and Tennessee. He feels that the site might also be used to portray the historical development of Appalachia over the last 100 years or more. The purpose of a restoration project at the Blue Heron site would therefore be to project the abstract idea of community life.

The question of a lodge at the Blue Heron site was discussed. Mr. Heroid stated that Senator Baker had no specific location for a lodge in mind. However, he feels that a lodge should be developed for use by visitors to the recreation area and should provide visual and physical access to the gorge. The lodge should not, however, be located in the gorge. He feels that the lodge should provide access to recreational amenities and activities for visitors. It should also be located in the general Blue Heron area.

Interviews were conducted with representatives of several comparable projects: The Beckley Exhibition Mine in Beckley, West Virginia, The Pocahontas Mine in Pocahontas, Virginia and Eckley Village in Weatherly, Virginia. The representatives of these projects were briefed on the characteristics of the Blue Heron site, (i.e. its history, location, present status and prospective use as an interpretive and recreational facility.) The general interviews with regard to the interpretive and recreational value of the Blue Heron site are summarized below.

First it appears that there are many aspects of mining community life styles that the general public is unaware of. It has been found that a well organized interpretive program about this subject can be interesting and most educational.

Another insight gained was that the general public is most interested in the mining operation itself, particularly with respect to the evolution of mining technology. This tends to indicate that it would be advantageous to include an interpretive film about operations within a coal mine as a part of the Blue Heron tour.

The interviews with representatives of comparable projects revealed that a tour of a coal tippie with interpretive displays, narrations, etc. would be unusual and likely be accepted by the public as an interesting offering within a Blue Heron tour.

Objective:

Determine the environmental problems connected with the restoration of Blue Heron.

Findings:

The Staff of Coastal Zone Resources Corporation feel that there are some environmental problems connected with the restoration of the Blue Heron site as a public use area. There are at least 13 drift mines along the Big South Fork below Yamacraw Bridge and Laurel Branch. Many of these mines are located on the Blue Heron site. According to Coastal Zone Resources Corporation, these mines have a tendency to fill with water and discharge acid into the Big South Fork. Corrective action would be required to eliminate this pollution. One solution which has been set forth consists of constructing concrete block walls in the mine entrances. Closing all mines, however, would have an adverse effect upon the bat population in the area. According to Coastal Zone Resources Corporation, there are as many as seven species of bats which inhabit the mines in the area of Blue Heron. A survey of these mines would be required to determine how many should be left open. Such a survey would cost approximately $7,500 according to Mr. David Adams, President of Coastal Zone Resources Corporation.

Flooding along the Big South Fork is an environmental problem connected with restoration of structures in the flood plain at Blue Heron. Floods as high as 53 feet above the normal water level have been recorded at the Stearns gaging station. In 1974 a flood of 38-1/2 feet was recorded. While the first level of the tipple may be high enough above the flood plain to avoid water damage, structures built at ground level would be subject to periodic flood damage.

The location of the natural bridge on the edge of the access road to Blue Heron presents a problem for widening of the existing road for adequate public access. The road at this point traverses a ridge line

with steep side slopes which complicate relocation of the road. Special consideration must be given to this problem if a high quality access road is constructed into the Blue Heron site without damaging the natural bridge.

Providing a large project at Blue Heron with water and sewerage service may be a problem. Constructing a sewerage line and water line into the site would not be economically feasible and the ditching operation would disrupt the environment. One or more wells and a package treatment plant would be required for a large project. Environmental problems could be encountered with these options.

The Staff of Coastal Zone Resources Corporation feel that there would be no major adverse affects upon the ecology of the Blue Heron site as a result of the site becoming a public use area. The site is presently in a "disturbed" state and there are no endangered plants or animals living in the area. If the solutions are found to the specific problems discussed above, there are no known environmental reasons for not utilizing the Blue Heron site as a public use area.

Objective:

Determine the safety problems connected with the development of the Blue Heron site as a public use area.

Findings:

According to the Staff of Coastal Zone Resourses Corporation, there are a number of safety problems connected with the use of the Blue Heron site by the public. The mines in the area present a clear hazard to the public. There is the ever present prospect of cave-ins as well as injuries resulting from falling into the shafts. The presence of water in the mines makes drowning an added hazard. These safety problems coupled with the acid discharge from the mines will require that the entrances be sealed. The mines which remain open for bat habitats must be fenced to prevent public access.

The tipple is a serious hazard to the public's safety. In its present state, it constitutes an "attractive nuisance" in that it invites climbers and curiosity seekers. If the Blue Heron site is to serve as a public use area, the tipple must be rebuilt in a manner that presents no hazards to the public, or must be fenced to prevent public access, or must be dismantled and removed from the site.

The trestle leading to the tipple and the trestle across Roaring Paunch Creek also constitute attractive nuisances. These trestles must be dismantled or fenced to prevent public access.

Land slides may be a problem in the area of the existing tram bed according to Coastal Zone Resources Corporation.

Interviews with representatives of coal companies revealed that a tour of an operating coal tipple would require many safety precautions. Safety railing and screening would be required to prevent visitors from falling from walkways and some measures would be required to eliminate inhalation of Coal dust that is generated by tipple operations.

Objective:

Determine specific problems connected with the various uses which are possible at the Blue Heron site.

Findings:

The Staff of Coastal Zone Resources Corporation made various comments on some of the possible uses at the Blue Heron site. These are summarized as follows:

. The proposed lodge site just south of Laurel Branch is in somewhat of a "disturbed" state and would not be affected adversely by the construction of a lodge.

. A parking lot in the flood plain could produce more serious run-off problems than a parking lot on higher ground. Therefore, a road directly into the Blue Heron site may be less desirable environmentally than a road that is intercepted by a public conveyance (tram) to move people into the Blue Heron site.

. Widening of the existing road, particularly in the flood plain, may produce serious erosion problems.

. Landslides may be a problem in the area of the existing tram bed.

. A coal burning train bringing people into the Blue Heron site would not damage the ecology of the area, but may detract from the scenic quality of the area.

Mr. Thomas Reed, Director of Special Programs, Kentucky Department of Natural Resources, was interviewed for the purpose of determining the implications of the Kentucky Wild Rivers Act for the Big South Fork at the Blue Heron site. This portion of the river is presently protected by the Act.

Mr. Reed stated that the Act forbids any construction within an area lying between the center of the river and the visual horizon, but not more than 2,500 feet. Mr. Reed further stated that, in general, national legislation would supercede Kentucky state legislation.

Mr. Reed stated that to his knowledge the Division of Special Programs of the Kentucky Department of Natural Resources, which administers the Wild Rivers Act, has not been contacted concerning the possible restoration of the Blue Heron Mining Community.

Interviews with coal company representatives and an engineer with The Daniels Company, consulting engineers, revealed numerous potential problems associated with a tour of an operating coal tipple. Initial costs and especially maintenance and operation costs would be very high. It appears, based upon these interviews, that a narrated tour of a non-operable tipple with coal placed in its various stages of

processing would be the most feasible alternative.

Objective:

Collect construction cost data and operation data for the development alternatives for the Blue Heron site.

Findings:

Contractors in various fields, material, and machinery suppliers, engineers, architects, utility company representatives, representatives of comparable projects, and cost estimators were interviewed concerning initial costs and operating expenses of facilities that would be possible at the Blue Heron site. These interviews produced sufficient data with which to evaluate costs on a preliminary basis. Because the persons furnishing cost data did not have the benefit of personally inspecting the site and submitting formal bids, these cost figures must be regarded as preliminary in nature subject to later verification.

Objective:

Determine which agencies and organizations should be included in the planning process of the project.

Findings:

The interviews indicated that the principal participants in the planning process should be the Corps of Engineers and the National Park Service with input received from consultants and various other agencies.

Objective:

Collect data on the offerings, construction and operation costs, arrangement strategy and visitation level of comparable projects.

Findings:

Interviews and correspondence with representative of comparable projects produced valuable insights. Complete data was not available from these sources with respect to construction costs and, in some cases, operating expenses due to the age and nature of operations. Visitation levels vary considerably from project to project primarily because each facility draws upon a different market area. The most comparable projects with respect to visitation levels are considered to be those

offerings within the Great Smokey Mountains National Park. Data on these projects were used as primary input for visitation projections for Blue Heron. Operating expenses of Blue Heron were estimated independently based upon its most probable scale of operation and the associated costs.

Objective:

Collect historical information of the Blue Heron Mining Community.

Findings:

Numerous persons known to have been familiar with the Blue Heron Mining Community were contacted. It was found that the number of original photographs of the Blue Heron Mining Community is very limited. and there was never a land plan of the original community. The study team relied primarily on data collected on the site. interviews and previous studies of the area for information on the original location and architecture of the structures.

Objective:

Collect information on current and projected tourist visitation levels and patterns in the general area of Blue Heron.

Findings:

The report Recreation Demand Big South Fork National River and Recration Area. June. 1975 and revised late in. 1975. prepared by Eric Hill Associates has been used as a source for visitation level projections for the National Area. Interviews with Mr. Vincent Ellis. Superintendant of the Great Smokey Mountains National Park and Mrs. Barbara Teaster and Mr. Jim Ryan of the National Park Service provided insight into visitation patterns that might be expected for the National Area.

SECTION SIX

PRIOR STUDIES AND REPORTS

BIBLIOGRAPHY

The literature reviewed for the purpose of this research is quite varied. Historical works on the Kentucky and Tennessee area were reviewed to provide historical prospectives for the plan of Blue Heron. Public Laws, both state and federal, were reviewed to determine the legal parameters for the restoration project. Market data and visitation studies were reviewed and the literature on comparable projects was covered to provide the input on the demand for the restoration project. Cost data from many sources was used as input in the financial calcuations. U.S. Corps of Engineers studies on the Big South Fork were reviewed for input on a number of topics.

A list of thirty works which constitute a large portion of the literature reviewed is provided in the following Bibliography.

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SECTION SEVEN

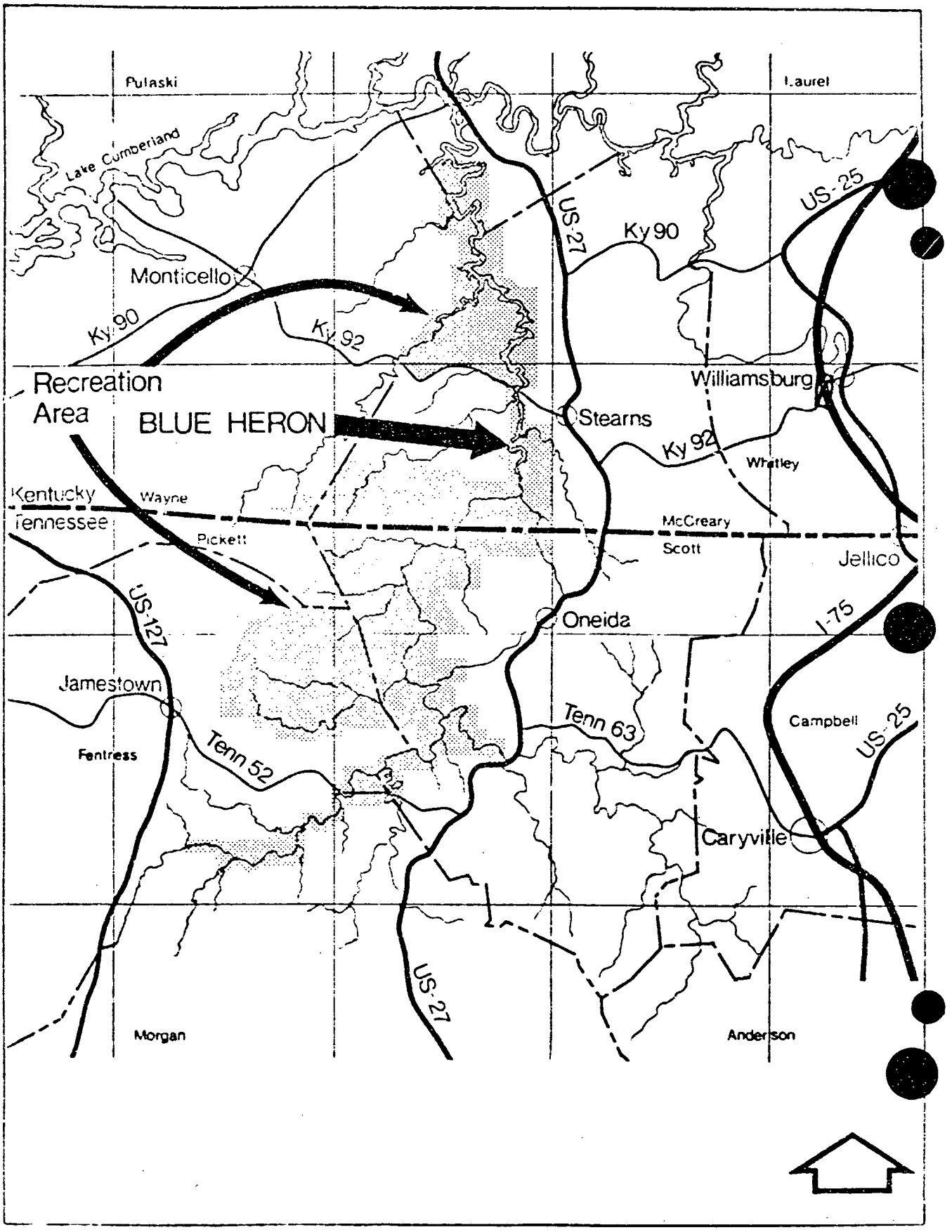
EXISTING SITUATION

LOCATION AND ACCESS

The Blue Heron Mining Community is located approximately four air miles southwest of the town of Stearns in McCreary County, Kentucky. It is approximately 32 road miles west of the intersection of State Highway 92 and I-75 at Williamsburg, Kentucky. The location of the Blue Heron site is shown on Map 1.

The site is accessible by way of State Road 742 which begins in the Revelo community just south of Stearns, Kentucky and runs westward for approximately eight miles ending at the Blue Heron site. State Road 742 is asphalt paved from Revelo westward for some three miles. The remainder of the road into the Blue Heron site is dirt and is in very poor condition. The road is impassable by all but four wheel drive vehicles in wet weather and is very difficult to traverse in an automobile in dry weather. The unpaved portion of State Road 742 in its present condition is totally unsuitable as a public access route to the Blue Heron site.

State Road 742 is reached by State Highway 92 which connects the town of Stearns with U.S. Highway 27 and I-75. State Highway 92 is an extremely narrow, winding asphalt surface road and is in poor condition. The road is used as a main route



Map 1 LOCATION

LAND DEVELOPMENT ANALYSTS

for coal trucks which keep the road surface in disrepair. Washouts are common along State Highway 92 from I-75 to Stearns. In its present condition, this road is unsuitable for tourist traffic. Widening and resurfacing of the road will be required to make it safe for heavy tourist use.

The Blue Heron site is also accessible by way of the Kentucky and Tennessee Railroad, which runs from Stearns to the northern edge of the Blue Heron site. Tourist access to the Blue Heron site could be provided by a passenger train from Stearns, but the Kentucky and Tennessee Railroad is used to haul coal and scheduling could be a problem. In addition, the spur line from the K&T into the Blue Heron site is in poor condition and a portion of the rail has been removed.

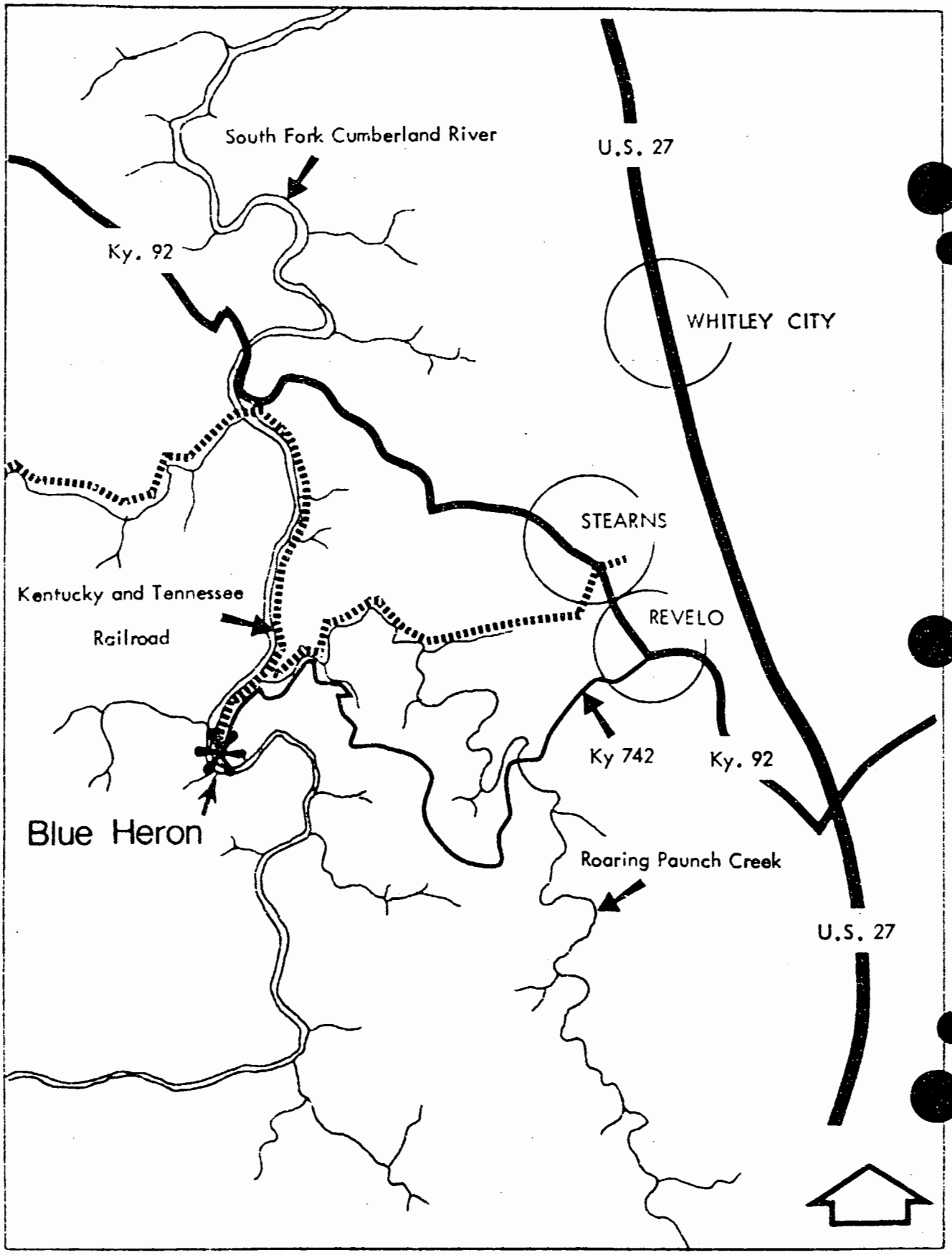
The access routes to the Blue Heron site are shown on Map 2.

LAND FORMS AND VEGETATION

The Blue Heron site has topography which is characteristic of the Big South Fork gorge. The Blue Heron Community was originally constructed in this gorge on the Big South Fork flood plain. The flood plain is backed by steep slopes and rock cliffs forming the walls of the gorge. The topography of the Blue Heron site and the surrounding area is shown on Map 3.

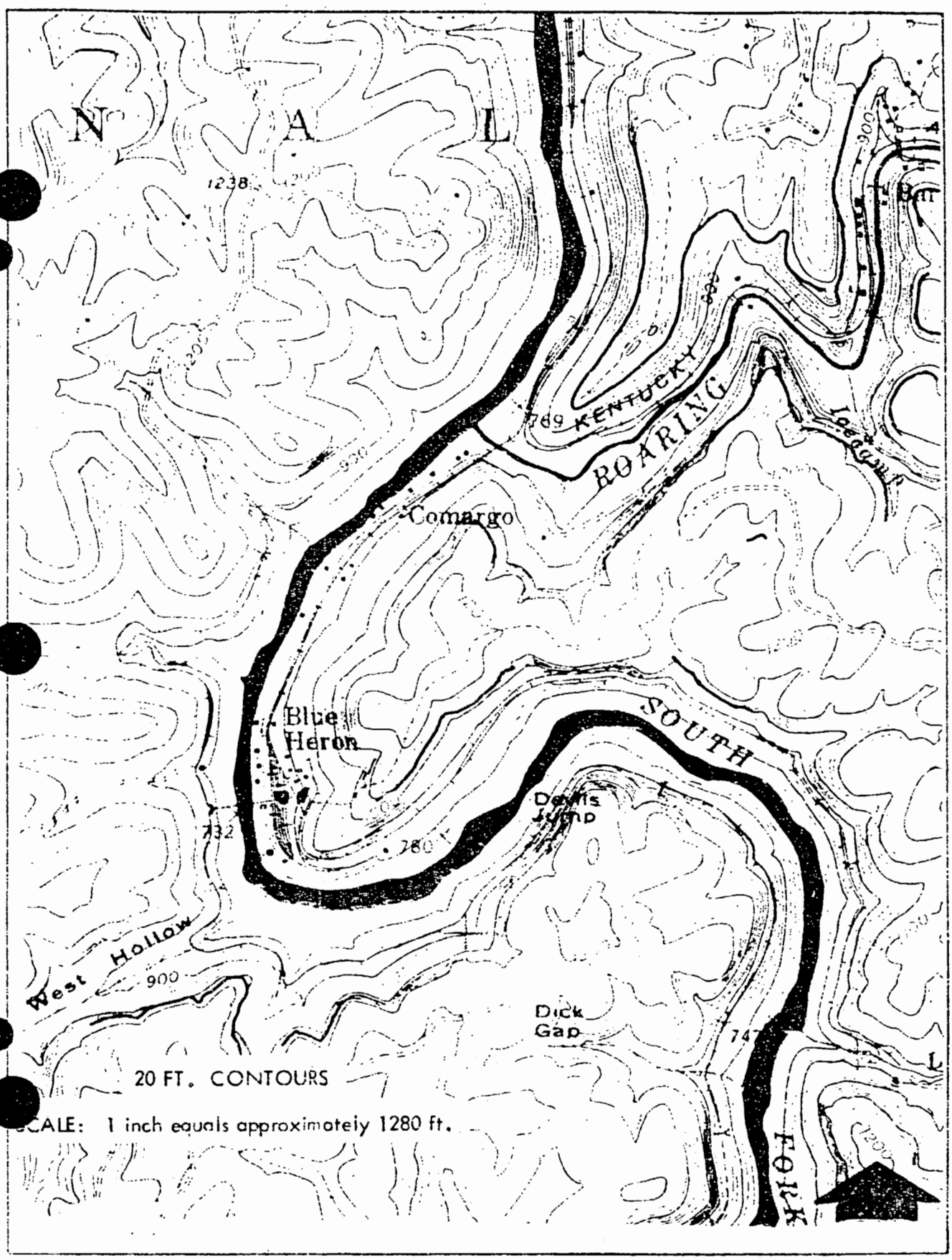
The Blue Heron site is heavily forested with both hardwoods and softwoods. However, there is a relative scarcity of very old large trees.

The vegitation on the Blue Heron site is not particularly unique.



Map 2 ACCESS

LAND DEVELOPMENT ANALYSTS



Map 3 TOPOGRAPHY

LAND
DEVELOPMENT
ANALYSTS

WATERWAYS

The Big South Fork traverses the Blue Heron site and the Roaring Paunch Creek flows along the northern edge of the site. Considerable fluctuations of water levels occur during the course of a year. Peak flows generally occur during the January-March period, while the low flows are characteristic of the June-November period.

Flooding along the Big South Fork is common during the winter and spring months. Floods as high as 53 feet above normal water level have been recorded at the Stearns gaging station just south of the site.

The water quality of the Big South Fork is suitable for recreational uses.

MINES

The blue Heron site was the location of a drift mining operation from the late 1930's to the early 1960's. There are approximately 40 mines in the Blue Heron area. These mines present a considerable hazard to visitors. There is an ever present danger of cave-ins as well as injuries resulting from falling into the shafts. The presence of water in the mines makes drowning an added hazard. In addition to these safety hazards, the mines have a tendency to fill with water and discharge acid into the Big South Fork.

STRUCTURES

The Blue Heron site presently contains a coal tipple, a narrow gauge tram trestle leading to the tipple and a standard gauge rail trestle across Roaring Paunch Creek. The foundations to several buildings are also present on the site. These structures are shown in Exhibit 1.

The tipple is a four level structure of steel and wood and houses the machinery which is used to sort the coal as it comes from the mines. The tipple has not been operated since the early 1960's and has badly deteriorated. Approximately 60 per cent of the corrogated steel on the exterior has been removed and the remaining exterior needs sand blasting, priming and painting. The windows have been broken and the copper wiring has been stripped from the structure. The electric motors which powered the machinery have also been removed.

The narrow gauge tram trestle which traverses the Big South Fork at the tipple cannot be used in its present condition. The rails have been removed and a large portion of the crossties are broken or missing. The steel structure is in need of sand blasting, priming and painting.

The trestle over Roaring Paunch Creek is in a much better state of repair than the other structures on the site. Only a few cross ties and wooden members need to be replaced to make it operable. 1/

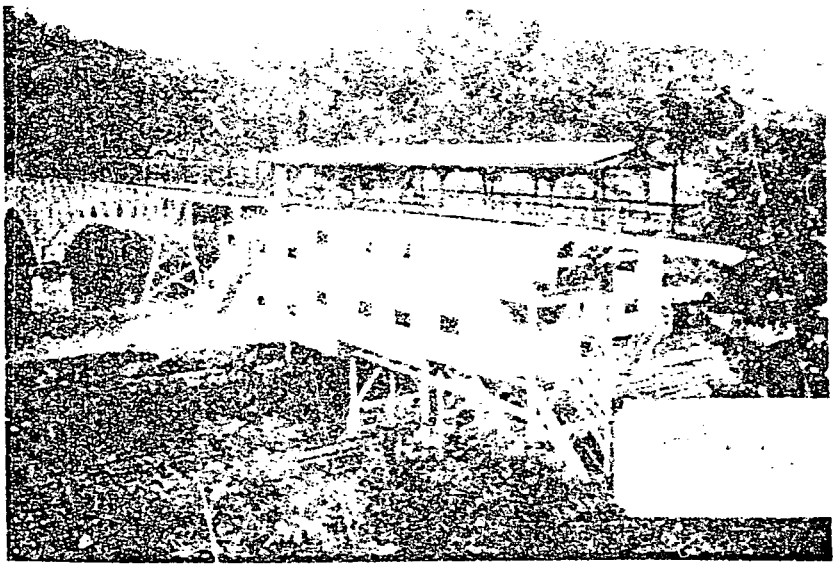
The rail bed from Roaring Paunch Creek to the tipple is still in existence but approximately 100 yards of rail has been removed. The cross ties on the bed are in need of replacement.

The tram bed which runs along the bank of the Big South Fork is still in place but the rails have been removed and the cross ties are no longer usable. Washes have occurred in spots along the tram bed.

All other structures on the site, with the exception of a small concrete bath house, have collapsed.

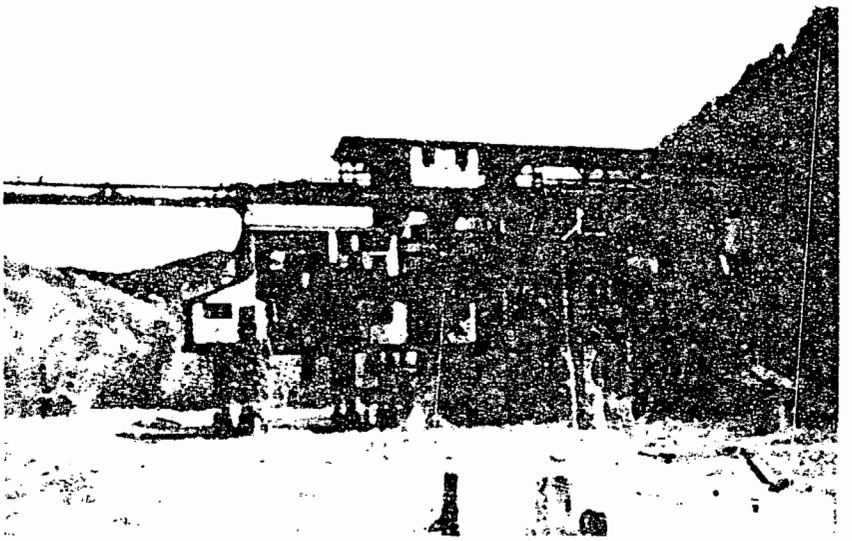
The historical value of the remaining structures at the Blue Heron site is not great. Many comparable tipples are presently in operation in the area and the architecture of the once existent buildings is prevalent throughout the many coal communities of Eastern Kentucky. It is probably most appropriate to characterize these structures as having "future historical value" if preserved.

1/ These conclusions are based on field surveys and are rendered for the purpose of determining the feasibility of the restoration project only. The evaluation of the structural condition of the trestles and tipple by a registered engineer will be required to render these structures safe for public use.

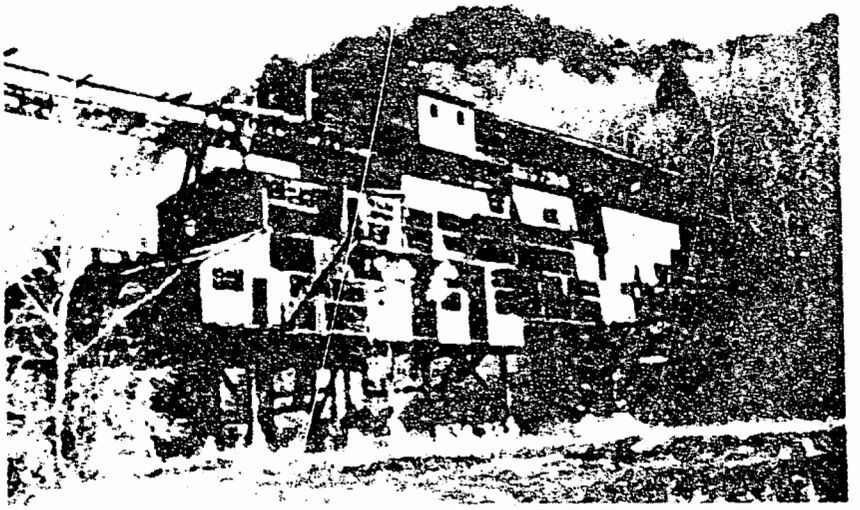


Blue Heron Coal Tipple in Operable Condition

Exhibit 1 PHOTOGRAPHS



Tipple



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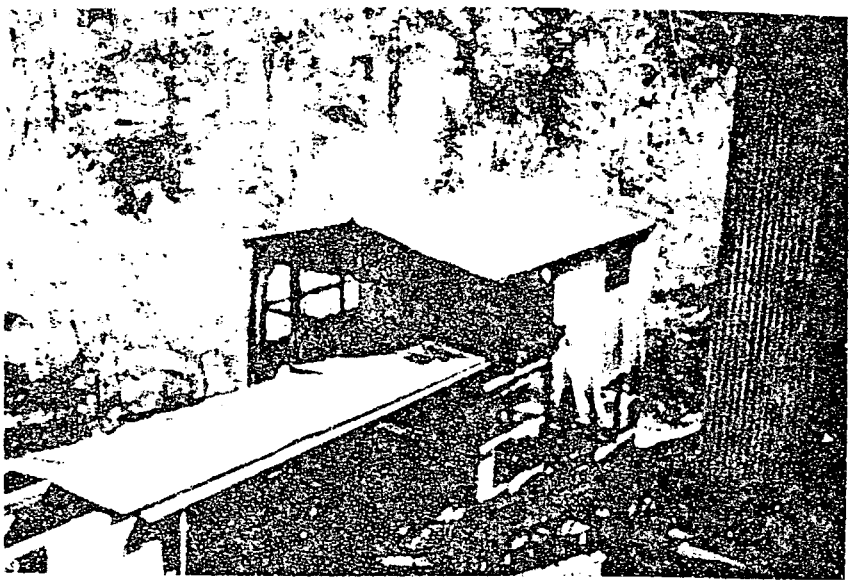

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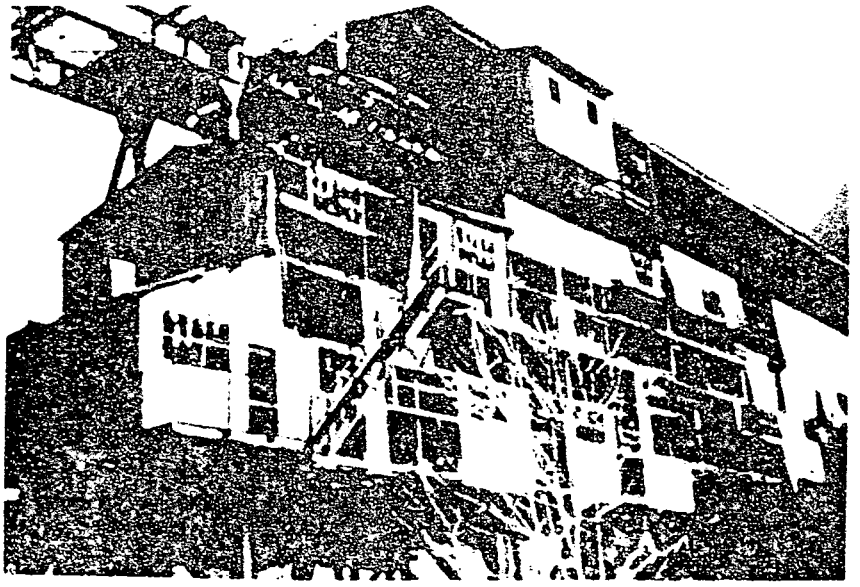
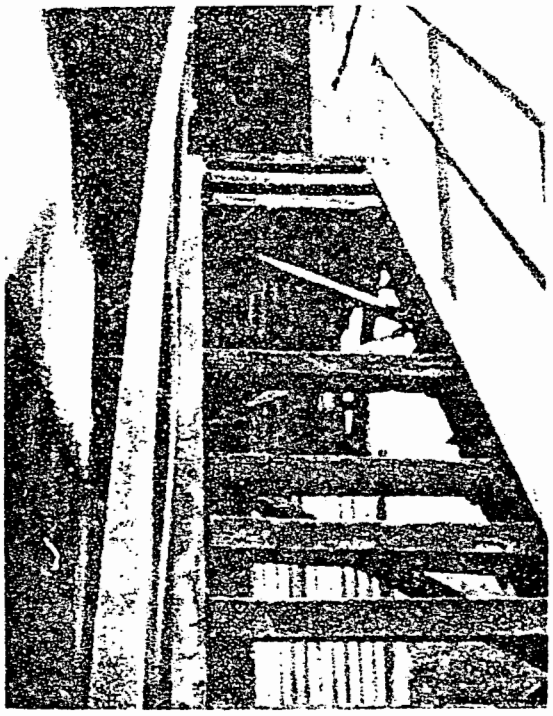
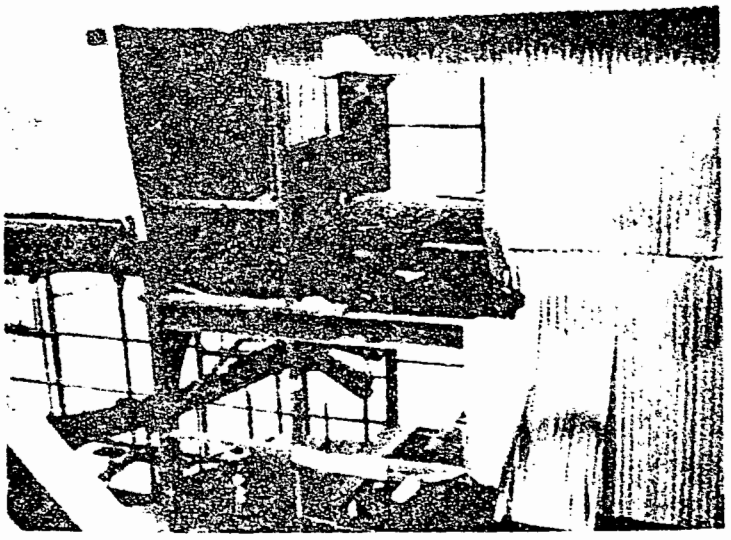


Tipple



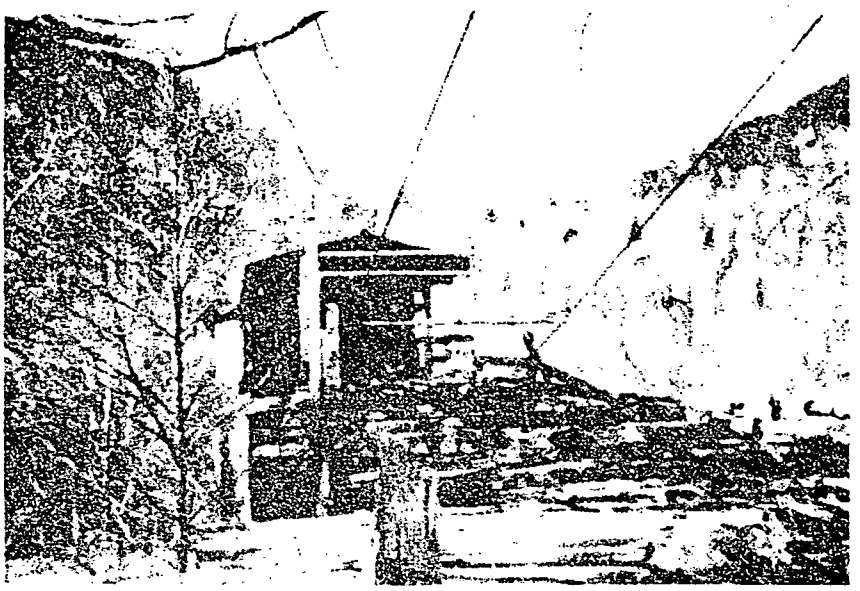
Exterior Tipple Steps



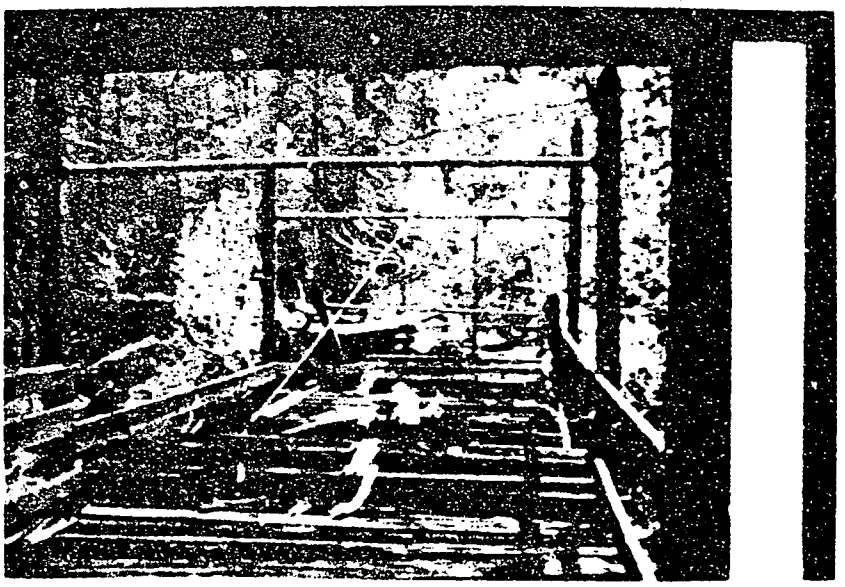
Tipple Interior

Trestle Over South Fork River

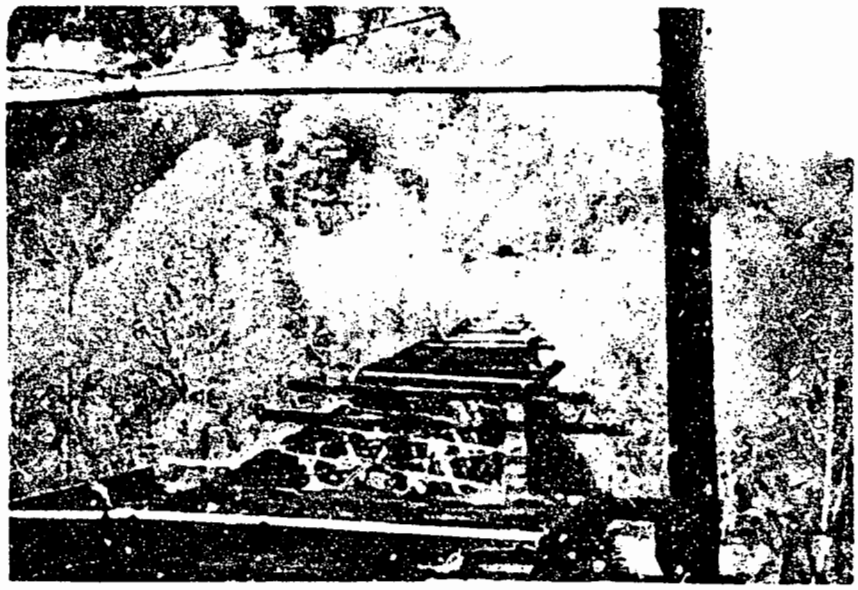
Trestle Over South Fork River



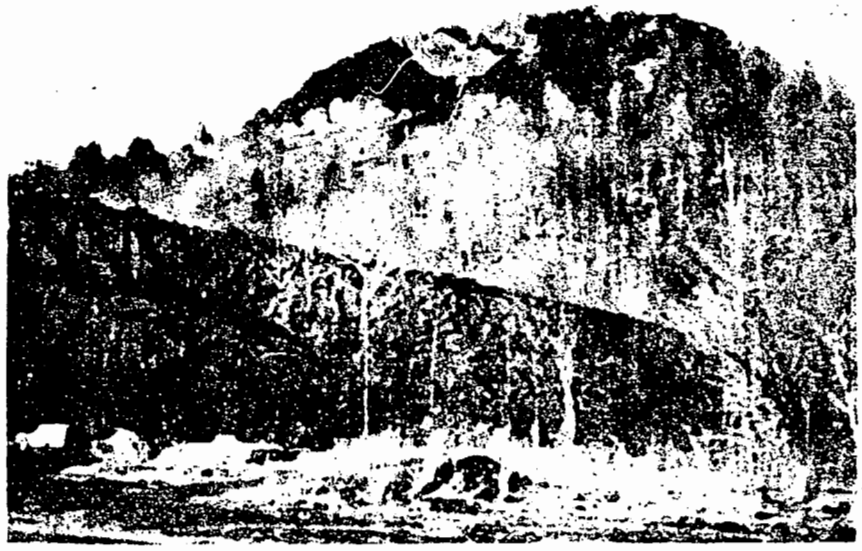
Eastern Section of Trestle to Tipple



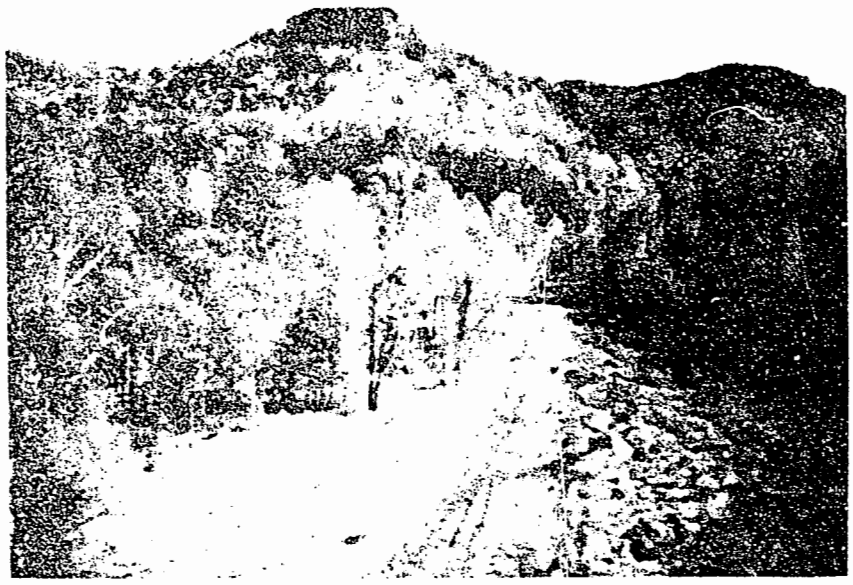
Eastern Section of Trestle to Tipple



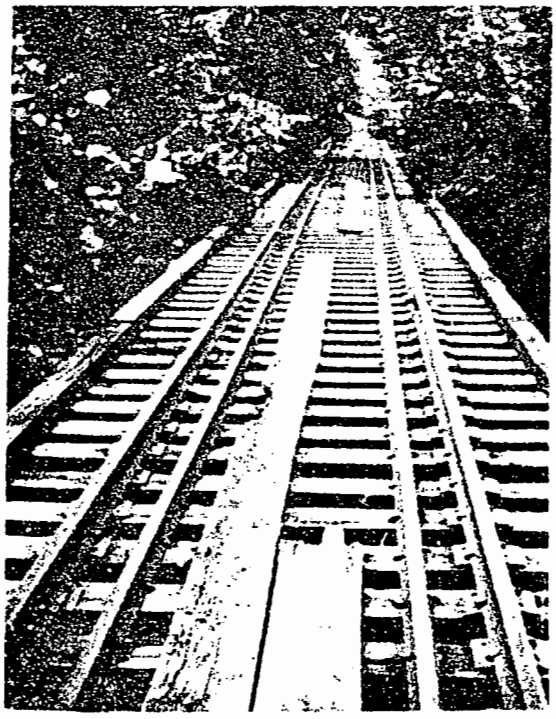
Trestle Over South Fork River



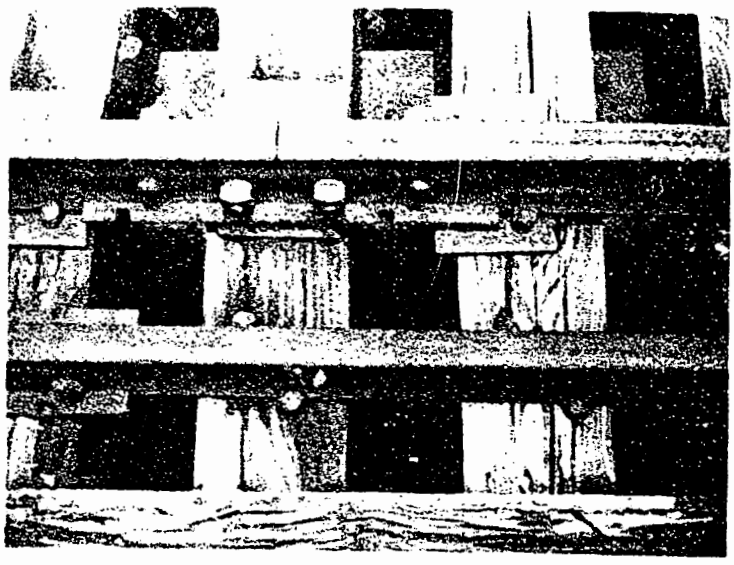
Trestle Over South Fork River



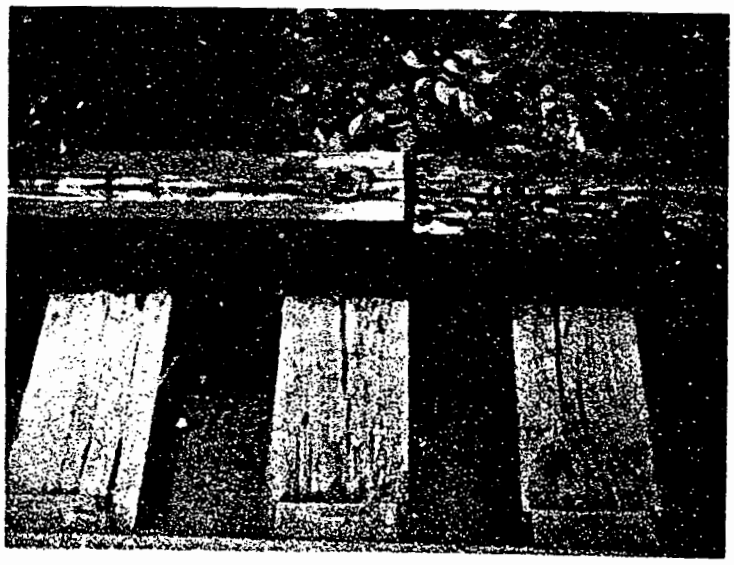
View North from Tipple



Trestle Over Roaring Paunch Creek



Trestle Over Roaring Paunch Creek



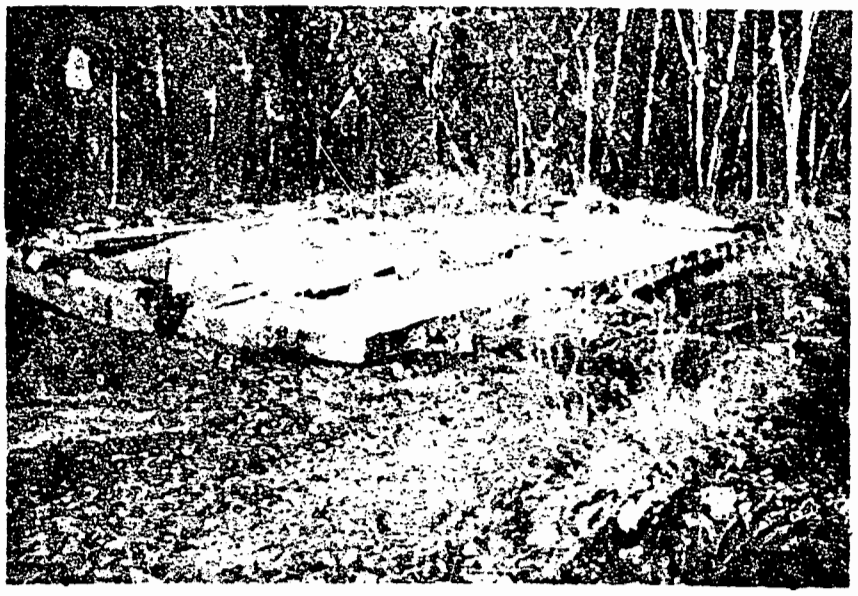
Trestle Over Roaring Paunch Creek

View South of Tipple

Tram Road

Structures

Structures



Broken Building Foundation

Concrete Building Foundation

SECTION EIGHT

FORMULATION OF A PLAN

FORMULATION AND EVALUATION CRITERIA

The recreational and interpretive potential of the Blue Heron site is summarized in the following sections.

Land Forms and Vegetation

The topography of the Big South Fork gorge at the Blue Heron site lends itself to several recreational and educational activities. The wild scenic character of the gorge provides a very desirable setting for hiking, picnicing and camping.

Hiking trails can be provided on the Blue Heron site as part of a larger trail network within the National Area. Interpretive markers would be appropriate along these trails to provide an educational element. The ecological systems of the site, such as the stream system, the flood plain system and the slope system, provide topics for such markers. In addition, the nature trails can serve as access routes to man-made features on the site such as the drift mines and remains of the various structures.

The rock cliffs of the gorge, particularly at Devils Jump, provide an opportunity for rock climbing for both the novice and experienced climber.

Picnicing and camping areas could be provided in the area of the Blue Heron site. The narrow flood plain in which the Blue Heron community was built is not particularly suited to camping and picnicing. However, facilities for these activities could be provided on the ridge to the east of the flood plain area. The knolls along this ridge have slopes which are moderate enough to allow the construction of camping

and picnic facilities. In addition, some of these knolls provide scenic vistas of the gorge and are fairly accessible from State Road 742.

Waterways

The Big South Fork, on which the Blue Heron site is located, is suitable for canoeing and fishing. The stretch of river from the Leatherwood Ford Bridge in Tennessee to Devil's Jump at Blue Heron provides rapids that are a challenge to the most experienced canoeist. The portion of the River from Devil's Jump to Yamacraw bridge is suitable for the less experienced canoist.

Mines

The drift mines in the area of the Blue Heron site have no known recreational potential. They present hazards to the public due to possible cave-ins and open, water filled shafts. These mines do, however, have educational or interpretive potential. When screened to prevent public access, they can be viewed from the exterior and interpretive markings and/or mechanical narrations can be provided. These mines also serve as bat habitats for several species of bats and interpretative displays on this topic should be of interest to the public.

Tipple

The coal tipple has definite educational potential. The opportunity to observe an operating tipple in a safe setting is very limited. While some coal companies will allow tourists to view the operation of their tipple, this is usually done on a very limited basis. None of the restored mines or restored mining communities studied have an operating coal tipple. Interviews and surveys indicate that a tour of coal tipple would be of interest to potential visitors to the Blue Heron site. The tour could be accompanied by mechanical narration or by a guide.

Trestle

The trestle across the Big South Fork at the tipple has both recreational and educational potential. It can serve as an access route to the tipple for a narrow gauge tram similar to those which carried the coal from the mines. This tram could be used to transport visitors into the upper level of the tipple to begin the tour. In addition, the trestle can serve as a catwalk for hikers to reach the west side of the river.

Tram Bed

The existing tram bed could be fitted with new rails and used for the operation of a tram to carry visitors on a riding tour of the Blue Heron area and could be used as the primary access mode for visitors if operated from a parking lot off State Road 742. The tram bed could also be asphalted for the operation of a rubber tire tram rather than a rail tram.

Rail Line

The K & T rail line from Stearns to Blue Heron could serve as a visitor access mode to the site. A passenger train of the period could transport visitors to Blue Heron from a point on State Highway 92 such as Stearns or the Yamacraw Bridge. This would offer visitors an opportunity to view a larger portion of the gorge from the train and would set the mood for a tour of a restored coal community.

Other Structures

The Blue Heron community originally contained a company store, school, church, a number of miners' homes (20±), a bath house, machine shop, and sand house. Only the foundations of some of these structures remain. These structures formed the physical fabric of life in the mining community. Reconstruction of certain structures would provide a format for the interpretation of life in the mining community. Several homes could be reconstructed and appropriately furnished to demonstrate the life style of miners and their families. A reconstructed company store should be of interest to site visitors and such topics as the script system and the social aspects of the company store could be portrayed. Other less interesting structures such as the machine shop and bath house could be equipped with mechanical narrations or interpretive markers.

Surveys and Interviews

The attitudinal survey shows clear support for a restoration project at Blue Heron. While some differences exist among various groups as to the exact facilities to be provided, the majority of all groups surveyed and interviewed feel that a restored mining community would be appropriate at the Blue Heron site.

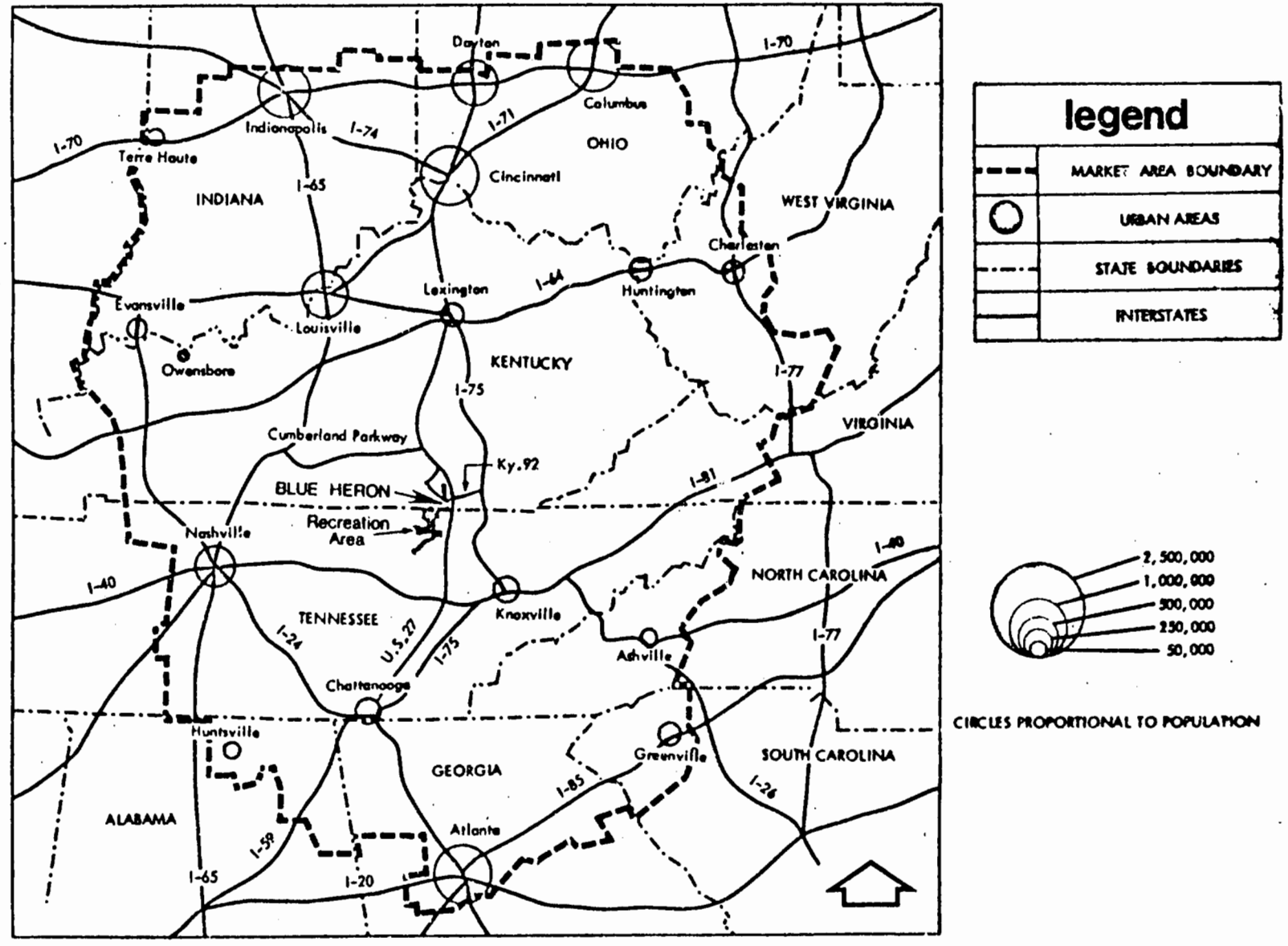
Projected Visitation

The draw of the National Recreation Area will provide the primary market for the restored facilities of the Blue Heron Mining Community. Eric Hill Associates of Atlanta, Georgia, projects a total of 344,000 visitors for the Big South Fork National River and Recreation Area in 1980. The number of visitors is expected to reach 559,000 by the year 2000.

The market area for the Big South Fork National Area, as defined by Eric Hill Associates, is shown on Map 4. Travelers from the vast majority of the population centers in the market area will reach the National Area by way of I-75. The most immediate access route into the National Area from I-75 is by Kentucky State Highway 92 and U.S. Highway 27 (via State Road 461.) These routes will bring visitor traffic into the Stearns/Blue Heron area, thereby, providing the Blue Heron site with an ideal location to draw upon the visitor traffic to the Big South Fork National River and Recreation Area.

The visitors' patterns of the Great Smokey Mountains National Park are instructive for the purpose of determining the portion of the National Area visitor traffic which may be attracted to the Blue Heron site. The Big South Fork National Area and the Great Smokey Mountians National Park are both located in the Eastern Kentucky/Tennessee area, have comparable market areas, and have comparable offerings.

A visitor sampling survey conducted in the Great Smokey Mountains National Park during 1974 by Amusement/Recreation Marketing Services, Inc, of New York



Map 4 MARKET AREA

indicates that three out of four visitors go to one or more of the Park attractions. Nearly half of the visitors surveyed went to the Cades Cove area which offers serveral restored pioneer homesteads and an old grain mill which is operated during the tourist season. Approximately 30 per cent of the Park visitors went to the Old Mill. The visitors sampling survey and interviews with the National Park Service Staff at the Great Smoky Mountains National Park suggest that a restored facility such as Blue Heron could attract 20 to 30 per cent of the total visitors to the National Area. [1/] On this basis, it is expected that 68,800 to 103,200 people would visit the Blue Heron Coal Community in 1980. This number should increase to 111,800 to 167,900 by the year 2000. Projections are shown in Table 2. These projections assume that a high quality interpretive facility will be provided at Blue Heron. It is also assumed that the site would be easily accessible from State Highway 92.

These projections are further supported by the observed characteristics of visitors to the Great Smoky Mountains National Park. The visitors sampling survey showed that visitors from outside the immediate park area had the following characteristics.

1/ These interviews were conducted during the Spring, 1975, with Mr. Vincent Ellis, Superintendent of the Great Smoky Mountains National Park, Mrs. Barbara Teaster, National Park Service, and Jim Ryan, National Park Service.

Table 1

Projected Visitation to the Blue Heron Mining Community

Month	% of Total 2/	1980 Low	1980 Most Likely	1980 High	2000 Low	2000 Most Likely	2000 High
January	1%	688	860	1,032	1,118	1,397.5	1,677
February	2	1,376	1,720	2,064	2,236	2,795	3,354
March	3	2,064	2,580	3,096	3,354	4,192.5	5,031
April	6	4,128	5,160	6,192	6,708	8,385	10,062
May	8	5,564	6,880	8,256	8,944	11,180	13,416
June	13	8,944	11,180	13,416	14,534	18,167.5	21,801
July	20	13,760	17,200	20,640	22,360	27,950	33,540
August	19	13,072	16,340	19,608	21,242	26,552.5	31,863
September	10	6,880	8,600	10,320	11,180	13,975	16,770
October	12	8,256	10,320	12,384	13,416	16,770	20,124
November	4	2,752	3,440	4,128	4,472	5,590	6,708
December	2	1,376	1,720	2,064	2,236	2,795	3,354
TOTAL	100%	68,800	86,000	103,200	111,800	139,750	167,700

1/ Based on a total of 344,000 visitors for 1980 and 559,000 visitors for the year 2000 to the Big South Fork National Recreation Area and capture rates for Blue Heron of 20%-Low, 25%-Most Likely, and 30% High.

2/ The frequency distribution of monthly visitation is based on monthly visitor data for the Great Smoky Mountain National Park for the 1970-1974 period.

- 53% have family incomes of over $15,000 and 32% have incomes of $20,000 or more.

- The average family (or group) visits the park for three to four days (3.6 average) and spends approximately $10.00 per day on admission/recreation fees and approximately $20 per day on food.

- More than half of the male household members spent sometime in college and more than 60 per cent are employed in white collar jobs.

- The majority of the visitors (80%+) are on vacation or honeymoon trip.

- Approximately 90 per cent of the visitors are married and more than 40 per cent have children under age 18.

These characteristics suggest that the potential Blue Heron visitor will spend enough time in the National Area to take the tour of the Blue Heron site, has an adequate income to pay an admission fee, and has enough education to enjoy interpretive displays and narrated tours.

The projected visitation levels for the Blue Heron Mining Community coupled with the characteristics of the potential visitor indicate that sufficient demand will exist to support an interpretive/recreational facility at the Blue Heron site.

PLAUSIBLE PLANS

Alternative I: No Action

Alternative I consists of making no improvements or alterations to the site. The tipple, trestles, tram bed and rail line would be left as they currently are to continue deteriorating; the mine shafts would be left open. The goal of this alternative is to incur no costs related to the Blue Heron site.[1/]

Alternative II: Safety Measures Only

Alternative II consists of the necessary steps to make the Blue Heron site safe for public use. Stabilization and preservation of the existing facilities on the site are not considered as part of this alternative. The goal of this alternative is to make the site safe for public use and to avoid a posture which renders the Federal Government liable for injuries received on the Blue Heron site by visitors.

The tipple presents a serious hazard in its present state. As mentioned previously, it constitutes an "attractive nuisance" in that it invites climbers and curiosity seekers who may be injured from falls or lacerations. This hazard can be eliminated by dismantling the tipple and removing it from the site or fencing the base of the tipple to prevent public access.

The two trestles present hazards to the public. One trestle crosses the mouth of Roaring Paunch Creek and the other tresstle crosses the Big South Fork

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1/ The access road into Blue Heron is slated for widening and paving in accordance with Public Law 93-251. This road improvement is given under each of the four alternatives and is viewed as part of the recreation area as whole rather than part of the Blue Heron restoration project.

at the tipple. Both trestles will require fences on either end and around the supporting columns to prevent public access otherwise these trestles must be dismantled and cleared from the site.

The mines in the area present a hazard to the public and must be sealed to prevent public access. A number of the mines, however, must be left open so as not to interfere with the bat population which uses the mines as habitats. The unsealed entrances to these mines must be fenced.

Alternative III: Safety and Stabilization

Alternative III consists of the necessary steps to make the Blue Heron site safe for public use and the necessary steps to prevent the further deterioration of the tipple, trestles, rail line and tram bed. The goal of this alternative is to preserve the existing facilities for possible restoration at a later date and to render the site safe for public use.

The goals of preservation and safety in relation to the tipple would be served by replacing the tipple's corrugated metal exterior and constructing a fence around the base of the tipple. This would halt the deterioration of the tipple and prevent public access.

The two trestles in the area can be preserved by periodic painting of the metal structures. Supporting members made of wood must be replaced from time to time. Fences on either end of the trestle and around the supporting columns will prevent climbers and curiosity seekers.

The mines at the site would be sealed and fenced under this alternative as in Alternative II.

The rail line from Stearns to the trestle at Roaring Paunch Creek is still in use by the Kentucky and Tennessee Railroad. The preservation of this portion of the line is not considered. The rail line from Roaring Paunch Creek to the tipple is in very poor condition. The rails have been removed within an area of 100 ± yards of the tipple. The rail bed, however, is in fair condition and should be maintained if later restoration is planned.

The tram bed along the slopes of the Big South Fork has not yet eroded. For later restoration, this tram bed should be maintained by repairing periodic slides and washes.

Stabilization of the existing improvements at Blue Heron and provision of safety measures for public use of the area will make the site suitable for some small scale interpretive and recreational facilities. Descriptive markings along walking trails at points of biological, geological and archiological interest could be provided at the Blue Heron site. These trails could lead to the entrances of some of the more interesting drift mines where interpretive displays would be appropriate.

Alternative IV: Redevelopment

Alternative IV consists of a set of land use options of which two or more may be selected to provide a mix of uses for the Blue Heron site. The goal of this alternative is to provide a public use facility at Blue Heron with a significant and unique recreational/ educational offering. Among the possible uses under this alternative are the following.

Tour of An Authentic Coal Tipple. The coal tipple is to be restored to an authentic state and the necessary alternations for visitor safety are to be made. In general, the restoration will require replacement of the corrugated metal exterior, repairing the wooden flooring, and the machinery made authentic. Visitors could enter the tipple from the upper level by way of the tram and trestle or from the lower level by way of an interior set of stairs or hydraulic elevator. Visitors would move through the tipple from level to level observing the various steps of coal sorting which will be accompanied by the appropriate narration. Each level of the tipple through which the visitors move is to be enclosed to prevent falling from the tipple to the ground or into the machinery. If the tipple is made operable, glass shields will separate the visitor from the machinery and 8 to 10 tons of coal would be processed through the machinery from top to bottom and then returned to the upper level by way of a vertical lift.

Tour of a Restored Mining Community. The key buildings which constitute a Mining Community are to be constructed. Among these buildings will be several miners' homes, a supervisor's home, company store, bath house, school and church. These buildings will be of the same architectural style as the original Blue Heron Mining Community. A walking tour through the reconstructed community will be accompanied by mechanical narrations and/or guides in authentic dress. Interpretive displays and narrations will present topics of interest such as furnishings of miners' homes, cultural aspects of life in a mining community, and the stock and operation of a company store.

Coal Museum. A coal museum is to be constructed and will serve as an interpretive medium for either the "story of coal" or the "story of energy production and use". Included in the museum would be displays of tools and machinery used in coal mining; company records, books and script; photographs of the original Blue Heron community and other mining communities exhibitions on the historical progression of coal production and use; and possibly exhibits on the history and future of energy production and use. A film on the history of Blue Heron and coal production in Eastern Kentucky could be included.

Train Ride. An authentic passenger train of the Blue Heron era could be operated from an area along State Highway 92, such as Stearns or the Yamacraw Bridge to the Blue Heron site. The train would serve as either the primary or secondary access mode for visitors to Blue Heron.

Tram Ride. A coal tram similar to the ones used to transport miners and coal is to be operated on the existing tram bed along the Big South Fork. The tram is to be either a narrow gauge rail vehicle or a rubber tired vehicle operating on an asphalt trail. It would run from a parking lot located off the immediate Blue Heron site and could possibly be coordinated with a lodge in the Blue Heron area but not on the Blue Heron site. In addition to serving as an access mode to the Blue Heron site, the tram would transport visitors to interpretive displays at selected drift mines along the route and would move visitors into the upper level of the tipple to begin the tour.

Nature Trails. A series of nature trails with descriptive markings would be constructed to provide a walking tour to view the biological, geological and archaeological points of interest at the Blue Heron site. Emphasis would be placed on the drift mines, bat habitats, and the ecological systems of the gorge. The entrance to one of the larger drift mines could be made safe for visitors and could serve as a location for appropriate interpretive displays on coal mining techniques.

Amphitheater. An amphitheater could be constructed in the general area of the Blue Heron site and would provide a location for theatrical and musical events. 1/

Camping Facilities. A camp ground could be constructed in the Blue Heron area and would provide primitive, walk-in camp sites as well as drive-in spaces for tent camping. 1/

Lodge. A lodge offering dining facilities and a full array of recreation amenities may possible by constructed in the area of the Blue Heron Mining Community, but not on the Blue Heron site. If the lodge is constructed, the opportunity will exist to connect the lodge with the Blue site by way of the tram, thus making the lodge area the starting point of the Blue Heron tour. In this fashion, the patronage of the lodge would augment the attractiveness of the Blue Heron tour and vice versa.

1/ These facilities need not be on the Blue Heron site itself.

Food Service. In addition to the restaurant which may be provided as part of the lodge complex, food service will be required at the Blue Heron site. A short order food concession blending with the mining community theme should meet the demand for food on the site. A mining community cafe motif could be adopted to maintain the atmosphere of the restoration project.

Land Use Mix. These land uses lend themselves to certain combinations which point up different land use mixes for the Blue Heron site.

The tram ride from an origin off the immediate Blue Heron site can be combined with a tipple restoration plan which allows visitors to enter the tipple on the upper level from the tram and trestle. The tram can also serve as a viable link between a lodge and the Blue Heron site.

The option of using a passenger train to move visitors to the site by way of the Kentucky and Tennessee Railroad relates nicely with a tipple restoration plan which utilizes an elevator or stairway to move visitors to the upper level of the tipple to begin the tour.

The construction of a lodge in the general area of Blue Heron provides an opportunity to construct a restaurant, overnight lodging, and recreation amenities such as tennis courts and a swimming pool. In addition, the lodge would augment the demand for the Blue Heron tour and an amphitheater.

The museum, reconstructed mining community, tipple tour and self-guiding nature trails with emphasis on the drift mines relate well to one another and provide the suitable structure for a well rounded interpretive tour on the story of coal. These uses should combine to provide an attraction with a significant drawing power.

PLANS CONSIDERED FURTHER

Alternative I

The alternative of making no improvements or alterations to the site has positive and negative aspects as follows.

Postive Factors

1. No capital expenditure will be required for site improvements and project management.

Negative Factors

1. If the site were opened for public use in its current condition, there would be a high probability of visitors being injured or killed due to the hazards connected with the tipple, trestles, and open mines. The Federal Government would run a high risk of being held liable for such injuries or deaths.

2. The tipple, trestles, rail bed and tram bed will deteriorate further if not preserved, thereby making restoration at a later date more expensive and perhaps impossible.

3. Allowing the site to remain in its present hazardous state and allowing further deterioration of the facilities would be unpopular among citizens, involved agencies and politicians on the local, state and federal level.

4. This alternative would have no favorable effect upon the local economy.

Costs

There would be no initial costs involved in Alternative I. While there would be no regular maintainance costs, the cost of legal settlements resulting from injuries and deaths caused by the sites hazardous condition could easily make this alternative most costly in the long run.

Conclusions

This alternative is not considered further. The site in its present state would be extremely hazardous and entirely unacceptable for a public use area. Injuries and possibly loss of lives could result from this alternative.

Alternative II

The alternative of making the site safe for public use but making no provisions for the preservation of the facilities on the site has positive and negative aspects as follows.

Positive Factors

1. This alternative is less expensive than alternatives III and IV and is probably less expensive than alternative I, which carries a high probability of litigation and damage settlements.

2. This alternative would make the site safe for public use.

3. If the tipple and trestles are dismantled and removed from the site, this alternative would provide for the maximum restoration of the wild and scenic character of the area.

4. This alternative would probably be popular among some groups such as environmentalists and naturalists, and might be acceptable to the National Park Service.

Negative Factors

1. The failure to preserve the existing facilities would remove the option of later restoration of the tipple, trestles and tram.

2. This alternative would be unpopular among some citizens, involved agencies, and political actors on the local, state and federal level.

3. This alternative would have no favorable effect upon the local economy.

Costs

The initial cost of safety measures involved in Alternative II would be approximately $30,000 if the existing structures are to be fenced to prevent access. If the existing structures were to be razed and removed from the site the initial cost is estimated to be $120,000. Maintaining costs of this alternative would be insignificant.

Conclusions

This alternative is not considered further. Failure to preserve the present facilities loses them permanently, and their presence would be an attractive nuisance. The alternative provides no benefit to the local economy.

Alternative III

The alternative of making the site safe for public use and providing for the preservation of the existing facilities on the site has the following positive and negative aspects.

Positive Factors

1. This alternative would avoid the high risk posture of developing a large scale restoration project based on projected rather than observed visitation levels to the National Area, and would preserve the option of restoring the Blue Heron Mining Community at a later date.

2. This alternative would make the site safe for public use.

3. This alternative would offer an opportunity to provide interpretive markers, nature trails, picnic areas and possibly primitive camping areas on the site.

4. This alternative may be the most acceptable alternative to the National Park Service and would produce a project that would be easily managed within the National Park Service's budgetary limits.

5. This alternative would probably be acceptable to most citizens, involved agencies, and political actors on the local, state and federal level.

6. This alternative would result in the least alterations to the site and would detract from the wild scenic character of the site less than alternatives I and IV.

Negative Factors

1. If this alternative is pursued as an interim phase leading to later restoration, the cost of restoration will be greater at a later date while government funding may be diminished.

2. If this alternative is pursued as the final alternative, the initial capital expenditures and maintenance costs would be incurred without the future opportunity to recoup these expenditures through a revenue producing project.

3. This alternative would have little or no favorable impact on the local economy.

Cost Factors

Alternative III would involve initial costs of approximately $75,000 of which approximately $45,000 is for preservation measures. Maintainance costs would consist of approximately $200 per year for miscellaneous repairs resulting from vandelism and if a reserve allowance is to be made for painting of the tipple and trestle every 12 to 15 years, an annual amount of approximately $900 should be set aside.

Conclusions

This alternative is examined in greater depth. It provides for a "status quo", and it permits financial flexibility for future improvement of the area. It offers safety, and it should be politically feasible.

Alternative IV

The alternative of restoring the Blue Heron Mining Community as an educational/ recreational facility has the following positive and negative factors.

Positive Factors

1. The net operating costs associated with this alternative may be less than the other alternatives.

2. This alternative would provide a unique interpretive and recreational facility.

3. This alternative would provide a recreational and educational experience for many more visitors than the other alternatives. The possibility exists that the project would have a national draw thereby providing an excellent opportunity for interpretive programs to serve large numbers of people.

4. The possibility exists that this alternative would produce a project that would augment the visitation level of the National Area.

5. This alternative would be very popular among some citizens, involved agencies and political actors on the local, state and federal level.

6. This alternative would have a favorable impact upon the local economy. Overnight expenditures, food expenditures, gasoline sales and general retail sales in the local area would be boosted by increased tourism.

Negative Factors

1. The initial capital outlay for this alternative would be much greater than the other alternatives.

2. This alternative could require extensive government subsidies for operation and management if the project is not developed on a profitable basis and is not agressively promoted and skillfully managed.
3. If a restoration project is developed prior to the opening of the National Area, a high risk posture would be assumed by the Federal Government in that development would be based on projected rather than actual visitation levels to the National Area.
4. This alternative would detract from the wild and scenic nature of the site more than the other alternatives.
5. This alternative would be unpopular among some citizens, involved agencies and political actors on the local, state and federal level.
6. Any redevelopment in the flood plain of the Big South Fork would be subject to periodic flooding.

Cost Factors

The initial cost of Alternative IV, based upon an optimum mix of recreational and interpretive offerings is estimated to be approximately $600,000. The revenue generating potential of this alternative should be sufficient, to offset maintanance costs.

Conclusions

This alternative warrants further consideration. The restoration is in keeping with the purpose of a National Area, and it provides a favorable effect upon the local economy. If restored in a manner that does not detract from the wild and scenic nature of the site, it should be a popular tourist and historical attraction.

Table 2

Postive and Negative Factors

Negative Factors	Alternatives I	II	III	IV
- The site would not be safe for public use	X			
- Existing structures and facilities would continue to deteriorate, thereby making restoration at a later date more expensive or impossible	X	X		
- If pursued as an interim alternative leading to restoration, the cost of restoration will be greater at a later date while government funding may be diminished	X	X	X	
- If pursued as a final alternative, capital expenditures would be incurred without the future opportunity to recoup these expenditures through a revenue producing project	X[1/]	X	X	
- The National Park Service would not favor this alternative	X			X
- If a restoration project is developed prior to the opening of the National Area, a high risk posture would be assumed in that development would be based on projected rather than actual visitation levels to the National Area.				X
- This alternative would further detract from the wild and scenic character of the site				X
- This alternative would be unpopular among some citizens involved agencies and politicians on the local, state, and federal level	X	X	X	X

Postive Factors	Alternatives I	II	III
- The site would be safe for public use		X	X
- Existing structures and facilities would be preserved			X
- Would avoid the high risk posture of developing a large scale restoration project based on projected rather than observed visitation levels to the National Area.	X	X	X
- Would keep open the option of restoration at a later date			X
- Would not detract further from the wild and scenic character of the site	X	X	X
- Would offer an opportunity to provide nature trails, interpretive markers, picnic areas, and possibly camping areas		X	X
- The National Park Service would probably find this alternative acceptable		X	X
- Would probably be acceptable to the largest number of citizens, involved agencies, and politicans on the local, state and federal level			X
- The net operating costs may be less for this alternative than the other alternatives and may produce an income stream to defray other expenses in the National Area.			
- Would provide a unique interpretive and recreational facility			

Negative Factors	Alternatives I	II	III	IV
- Any redevelopment in the flood plain of the Big South Fork would be subject to periodic flooding.				X
- This alternative could require extensive government subsidies for operation and management if the project is not developed on a profitable basis and is not aggressively promoted and skillfully managed. The required operating budget could consume budgetary allocations intended for other National Park Service facilities				X
- The initial capital outlay for this alternative would be much greater than the other alternatives				X
- This alternative would have little or no favorable impact on the local economy	X	X	X	
- Would probably be unacceptable to most citizens, involved agencies and politicians on the local, state and federal level	X			

Positive Factors	Alternatives I	II	III
- Would provide a recreational and educational experience for many more visitors than the other alternatives. The possibility exists that the project would have a national draw thereby providing an excellent opportunity for interpretive programs to serve large numbers of people			
- The possibility exists that this alternative would produce a project that would augment the visitation level of the National Area.			
- Would have a favorable impact on the local economy			
- Of the alternatives which make the site safe for public use, this alternative requires the lowest level of expenditures for improvements and maintenance			X
- Would require no expenditure for site improvements	X		

1/ Costs may be incurred as a result of law suits resulting from on-site injuries.

SELECTING A PLAN

Alternatives I and II have been rejected and Alternatives III and IV are considered furthier. Alternative III is evaluated in greater detail as an alternative for the period immediately following site aquisition. Alternative IV is evaluated in greater detail as an alternative for the period immediately before jurisdiction is transferred to the National Park Service.

Alternative III: Safety and Stabilization

Alternative III consists of the safety measures discussed under Alternative II plus the necessary steps to prevent the further deterioration of the improvements on the site. This alternative makes the site safe for public use and keeps open the option of restoration at a later date. It also eliminates the unsightly character of the delapidated structures in the gorge.

The initial cost of Alternative III is estimated as follows:

Cost Analysis

Item	Estimated Cost
Safety Measures:	
- Fence off mines	$3,250
- Seal mines	$7,500
- Bat habitat study	$7,500
- Remove Scrap Materials from Site	$1,500
- Fence trestle over Roaring Paunch Creek	$2,250
- Fence Tipple and trestle over South Fork River	$1,200
Subtotal	$27,030
plus contingencies	2,970
TOTAL	$30,000

Item	Estimated Cost
Preservation Measures:	
- Sandblast, prime and paint metal support members of trestle over Roaring Pauach Creek	$2,600
- Sandblast, prime and paint metal support members of trestle over South Fork River	$14,000
- Repair and repaint tipple exterior	$18,000
Subtotal	$34,600
plus contingencies	$10,400
TOTAL	$45,000

TOTAL COST OF ALTERNATIVE III $75,000

Approximately $45,000 of the total estimated cost of Alternative III is for preservation measures while the balance of $30,000 is for safety measures.

Reasons for Selecting Alternative III as an Initial Phase

Alternative III has been selected as the best alternative for the period immediately following site aquisition for reasons cited below:

1. Safety measures are considered absolutely essential because the site is unsafe and constitutes an attractive nuisance in its present state. This is entirely unacceptable for a public use area. Thus the safety measures are accepted as being unquestionablynecessary.

2. Site improvements are in a rapidly deteriorating state and if preservation measures are not taken restoration at a later date would be considerably more expensive if not impossible. The research of this study has indicated favorable potential for a recreational and interpretive facility at the Blue Heron site once the National Area opens. In light of these circumstances, the preservation measures

appear to be warranted.

3. By taking preservation measures recommended in Alternative III the unsightly appearance of the delapidated structures in the gorge would be eliminated thus improving the scenic character of the area.

4. Accepting Alternative III rather than Alternative IV as an initial phase would avoid the high risk posture of developing a large scale restoration project based upon preliminary projections of visitation levels to the National Area.

Alternative III is therefore recommended as a viable alternative for the period immediately after site acquisition but prior to the opening of the National Area.

Alternative IV: Restoration

The restoration alternative consists of a set of land use options which make the Blue Heron site safe for public use, preserve the existing structures, and provide a significant and unique recreational/educational offering. In general, this alternative includes the safety measures and many of the preservation measures discussed under Alternative III. Additional offerings would include a mix of recreational and interpretive facilities selected on the basis of cost effectiveness.

The research conducted on this alternative indicates that a restoration project has strong support among citizens, involved agencies and politicians on the local, state and federal level. Such a project would provide an excellent recreational and interpretive opportunity for a large number of visitors and would have a favorable impact on the local economy.

Cost Analysis

Alternative IV, restoring Blue Heron as an educational/recreational facility, actually has numerous sub-alternative possibilities. The restoration program could be extensive or it could be very basic. The initial costs and the operation and maintenance costs would depend upon the scale of the facility built. The costs of various options within Alternative IV must be evaluated in light of the benefits that would be derived. On the following pages rough initial cost estimates are offered for various installations on a per unit basis (e.g., per mile, per structure, etc.). Approximate operation and maintenance costs are estimated in a rough cut fashion. The economically infeasible options within Alternative IV are rejected. After these cost factors are evaluated, initial and operation cost estimates are derived.

Parking Lot. A parking lot would be required at the end of Route 742 to accommodate 100 to 150 automobiles. This lot should be paved with a bituminous aggregate surfacing (a surface treatment process which consists of a gravel base and a surface of tar and small gravel). The cost of this lot, using local material costs, appears to be approximately $12,000.

The maintenance costs would consist of repaving every fifteen to twenty years at a cost of roughly $10,000.

Tram. Two basic tram systems have been studied--rail and rubber tire vehicles. The costs are outlined as follows.

Rail Tram. Very little of the original tram track remains on the Blue Heron site. Most rail ties have either deteriorated or been removed. The only salvageable elements of the original tram system seem to be the rail bed itself and possibly the bridge structure as it extends from the tipple to the west side of the river. The cost of restoring most of the tram system to operable condition would be approximately the same as an entirely new installation.

A wide variance in rail installation cost factors were reported among those interviewed. The lowest estimate received was from Mr. Bryan, who installed and now operates the railroad at Six Flags Over Georgia amusement park. Mr. Bryan felt that by purchasing relay rail at one dollar per linear foot and buying used rail ties, the cost could be held to $7 per linear foot of trackage. Mr. Foundren of Southern Railway estimated that the costs would be roughly $18 per linear foot. Mr. Bert Williams, President of Crown Metal Products (manufacturer of steam trains), reports that lightweight relay rail has become scarce and that the recent construction bids he has on file indicate construction costs of $16 to $27 per linear foot. A cost factor per linear foot of approximately $25 appears appropriate. The cost per mile would be approximately $132,000.

An engineering study would be required to determine the structural condition of the bridge which extends from the tipple to the west side of the Big South Fork. Provided that this study shows the bridge to be sound,

new ties, rails, guard rails and related hardware would be required on this bridge and the top of the tipple. The bridge extending from the east of the tipple would need to be reconstructed.

A rough estimate of the cost to replace the bridge on the east side of the tipple would be approximately $20,000. This would not include the rail and ties. Approximately 920 linear feet of rail line would be required to transverse both bridges and the tipple. Using cost factors of $30 to $35 per linear foot, an installed cost of approximately $32,200 is derived. The total cost, exclusive of an engineering study, is indicated to be approximately $52,200. Including an engineering study and a contingency allowance in this estimate, a cost factor of $45,000 to $70,000 appears appropriate.

Maintenance expense on the rail lines would be for periodic replacement of ties. Over a long term, the ties would begin to deteriorate. Therefore, maintenance costs would be negligible during the first 15 to twenty years, but then they would rise. If the ties are placed 14 inch on center there will be approximately 4,525 ties per mile. The replacement cost in today's dollars would be roughly $5 to $7.50 per tie plus $8 to $10 per tie for labor. The cost of replacing ties at about $17.50 each would eventually cost about $79,000 per mile. Spreading this cost over a 40 year period beginning twenty years hence would mean an average expense during those years of $1,975 per year.

Two types of vehicles could be operated on this track. West Virginia Armature, Inc., builds a small electric locomotive called a jeep priced at $13,000 plus $2,000 for the battery. This vehicle is used in coal mining operations. A battery recharger would be required which would cost about $2,000. If the unit is used heavily each day, two interchangeable batteries may be required. The total cost would be approximately $19,000 for the power unit. Passenger cars capable of carrying 10 to 15 people could be fabricated for approximateiy $2,500 each. The total cost of the vehicles and recharging unit would be approximately $29,500. Operation and maintenance costs would be small--probably limited to recharging the battery daily and periodic lubrication and painting. Power usage would likely be $150 to $300 per month and other maintenance should average $750 to $1,000 per season. The battery would have an average life of ten years; a $160 per year reserve allowance should be made for this item. A maintenance cost of $1,100 to $1,500 per year appears reasonable.

A miniature steam engine could also be used on the tram track. Crown Metal Products makes a 24-inch gauge engine which sells for $26,500. The passenger cars, each of which have a capacity of 24 adults or 32 children, are priced at $4,950 each. The total cost of this unit would be approximately $36,400. It would also be possible to have smaller, less expensive cars fabricated and thereby reduce the cost slightly. Operation and maintenance costs as estimated by Mr. Williams of Crown Metal Products would

be 20 to 30 gallons of fuel per day--$10 to $15, $.50 per day for lubricating oil and $1,000 to $1,500 per year for maintenance and parts. The total operation and maintenance costs would be roughly $2,000 to $2,900 per year depending upon usage levels and the length of the season.

Rubber Tire Vehicle Tram. Under this alternative a small roadway would be paved for the tram device consisting of a rubber tire locomotive pulling a series of passenger cars. The tram roadway would be similar to a one lane road with traffic pullouts but it would not be quite as wide, therefore less expensive. Most routes being considered for tram paths have sound surface beds and will require relatively little grading and fill. An average cost of approximately $20,000 per mile is estimated for surface treatment and approximately $34,000 per mile is estimated for asphalt.

Maintenance costs would result from resurfacing every 15 to 20 years. The cost per mile would be roughly $4,600 for surface treatment and $9,250 for asphalt (based upon 1975 price levels).

The most practical locomotive for a rubber tire tram is a small petroleum fired tug or tractor unit. Yale builds one of these, similar to those used in airports to haul baggage cars. The price of a new tug is $7,000. Passenger cars capable of hauling approximately 20 people each could be fabricated for roughly $3,000 each. A total cost of approximately $16,000 is indicated, assuming three passenger cars.

Operation and maintenance costs would be roughly $2.00 to $2.50 per hour of use (including fuel). An annual cost of approximately $2,000 per year would be involved.

Rail vs. Rubber Tire Tram. From the perspective of initial costs, the rubber tire alternative makes better sense. For example, a three mile rail tram track would probably cost approximately $396,000 whereas a three mile paved track would likely cost approximately $60,000 in surface treatment and approximately $102,000 in asphalt. The overall difference in operation and maintenance costs between the two alternatives are not strikingly different, although the battery powered rail unit appears least costly.

The rubber tire vehicle has several practical advantages over the rail. It can climb relatively steep grades and it has more flexible route possibilities. Due to the purposes that a tram at Blue Heron must serve, the rubber tire alternative makes much better sense. An additional advantage of a rubber tire tram system would be the opportunity to use the tram path as a restricted access roadway for service and engineering vehicles.

Steam Train Ride. The train ride would most logically originate on the existing Kentucky and Tennessee Railroad line in Stearns or at Yamacraw. It would use the existing K & T rail line between the originating point and the Roaring Paunch Creek rail bridge, then it would cross this bridge and travel along an abandoned rail line into the Blue Heron site. An engineering study would be necessary to determine the soundness of the bridge and rail line which has been out of use since 1962. The rails have been removed near the tipple and would have to be replaced. Ties would also require replace-

ment in this area and periodically along the line further to the north. An approximate cost of $10,000 is estimated for this work, although an engineering study will be necessary to determine accurately the costs involved.

The largest steam engine manufactured by Crown Metal Products is a 36-inch gauge. The wheel axles would require extension to make them wide enough to accept the standard width rail. The cost of the engine and tender car would be approximately $25,000 plus $5,000 for the necessary conversions. Passenger cars capable of carrying 80 adults each would cost $22,500 plus $5,000 for the wider axles. The total cost would be roughly $157,500 with one passenger car, $185,000 with two cars and $212,500 with three cars.

Operation and maintenance costs as furnished by Mr. Williams of Crown Metal Products would roughly be $100 to $200 per day for fuel (250 to 400 gallons LPG or oil), $1.50 per day for lubrication and $1,500 to $2,500 per year for maintenance and repairs. Operation and maintenance costs are indicated to be approximately $10,500 to $21,000 per year for a three month season and $20,000 to $39,000 per year for an extended season.

Several important factors must be considered here. First, it will be necessary to acquire and possibly store 1,750 to 2,800 gallons of fuel per week to power the steam train. Secondly, a machinist would be required, at least on a part time basis, to perform periodic repairs on the train. Some form of a repair shop would also be necessary.

In summary, the steam train ride would involve high initial costs and extensive operation and maintenance costs. Because the train would require heavy usage to justify its cost and several potential maintenance complications exist, the steam train option should be scrutinized closely.

Residential Structures. The construction costs of residential structures are estimated by use of the Boeckh Building Cost Modifier, a reliable construction cost source. Costs of the miners' homes are estimated on the basis of the "Economy Residence Model" which by Boeckh's definition best fits this type of housing. The cost of the mine superintendent's house is estimated on the basis of a "Model III-One and one-half story". A time-location modifier for Lexington, Kentucky, is applied. This modifier factor is within one per cent of the factor shown for Knoxville, Tennessee, which further justifies its use. The houses could either be finished so that visitors can walk through them or they could be basic shells with no interior finish to be viewed from the exterior.

Two basic size miners' homes were originally in the Blue Heron Community. Although it is unknown precisely how large these homes were, it is estimated that the small ones were 400 square feet and the larger ones were 800 square feet. All would have fireplaces. The cost of the smaller house is indicated to be $4,000 for the shell or $6,200 for the finished home (without heating and plumbing). The larger house is indicated to cost $5,450 for the shell and $9,200 for the finished version. It is assumed that the mine superintendent's house (again without heating and plumbing, but with fireplace) is $18,400. The shell version is indicated to cost $9,000.

Furnishing costs would be small for the miners' homes, estimated to be approximately $2,000 each. The mine superintendent's house would be more elaborately appointed and the furnishing costs are estimated to be approximately $6,000 each.

Maintenance expenses for the shell version would be less than half the expense of the finished unit.

Church. The original church at Blue Heron was fairly large. Mr. Slaven, former superintendent of the mining operation, commented that the church had seating capacity for 200. This indicates that it was at least 2,500 square feet and possibly larger. It would be unnecessary to re-build the church to its original size. A structure of 1,000 to 1,500 square feet should appear authenic and would certainly be less expensive.

The construction cost of the church is estimated by using the Boeckh cost factors for an "economy residence" plus allowance for a simple steeple, etc. A mining community church would not be elaborate, but rather it would be of very simple construction. The cost of the smaller church would roughly be $10,000 finished or $5,500 for the shell version. The larger church, 1,500 square feet, would cost approximately $14,500 finished and $7,000 for the shell. No fireplace is included in these cost estimates. Approximately $2,000 should be added to the above figures if a fireplace is to be included.

A furnishing cost estimate of $1,500 is used to reflect the cost of constructing some rustic pews, pulpit, etc. The maintenance costs of the shell version are estimated to be less than one half the amount of the finished version.

School House. The original school house at Blue Heron was a four room house from which all partitions had been removed. It was probably 750 to 1,000 square feet in size. The cost of a school house is estimated to be approximately the sam

as one of the larger homes for the miners--$5,450 for a shell and $9,200 for a finished version. Furnishing costs are estimated to be approximately $1,500.

Again, the shell version would be less expensive to maintain.

Bath House. The bath house was a large corrugated metal structure which included lockers, shower facilities, and battery rechargers for helmet lights. Mr. Slaven, the former superintendent of Blue Heron, stated that the bath house was roughly 50 x 75 feet in size or 3,750 square feet. Reconstructing this structure to an authentic, but non-operable status would cost roughly $52,500. A smaller bath house, say 1,500 square feet, would cost roughly $15,000. The smaller structure would probably be acceptable. Almost no maintenance expense would be involved for this basic structure.

Company Store. Costs of this structure are estimated by Boeckh Building Cost Modifier factors for a "retail store building" plus additional costs for air conditioning and a second public restroom. Boeckh defines this structure as "a small retail store building of wood frame construction, typical in older sections of Anytown, USA, or Canada."

The company store building could serve many uses in the restored Blue Heron community. In the typical mining community, the company store contained a general merchandise outlet, a post office, the company offices and in the larger communities it sometimes included a theater. The company store was usually the largest building in the community and it was the focal point of the community. Because the company store was such a multi-purpose structure in an actual mining community, it would be appropriate to combine several uses in the structure to be built at Blue Heron. Among

the possible uses would be a mock-up company store stocked with authentic merchandise of the original era, a gift and souvenir shop, a fast food outlet or small scale cafe, an office of some sort and an adjoining museum of coal mining, energy, etc.

The cost estimates provided below pertain to the basic building only. The finishes required for individual uses within the building would be additional.

Sq.Ft. of Space	Approx. Cost of Structure
1,000	$21,000
2,000	35,500
3,000	49,500
4,000	64,000
5,000	79,000
6,000	94,000

The costs that would be added to these basic structure costs would be approximately $5,000 for a kitchen and seating for the food service; about $3,500 for shelving and display cases in the gift shop; approximately $6,000 for the reporduction of an original company store, office space finish and equipment cost (undetermined) and the costs of museum finishes and contents.

The costs of the museum area could vary substantially. A simple museum consisting of several display cases, some photographs and perhaps some old mining equipment would cost roughly $2,500 to outfit (exclusive of the costs of historical contents). A more elaborate museum could be much more expensive. A small display case costs $200 to $500. A display case which includes a taped message costs about $450 to $1,000. An exhibit consisting of a projected image from a series of slides with an accompanying taped message costs $1,000 to $3,000 and sometimes more. A small theater might also be included to familiarize the visitor with the history or methods of coal mining, life in a coal mining village, etc. Set up costs for a theater that would seat approximately 30 people would be roughly $7,500. An extensive museum finish with a theater, many displays, etc., would be about $20,000.

Tipple. Several options exist for use of the tipple in the Blue Heron restoration project. The possibilities considered are briefly described as follows.

A. Recover and appoint tipple and trestle as described under Alternative II to permit public viewing from the outside only.

B. Recover and paint tipple and install a walkway system through the building so that visitors could view the inside of the building and its machinery. Visitors could either enter from the top and walk down through the building to be picked up by a tram at the bottom or an elevator could be installed at the side of the structure to carry persons from floor to floor.

C. Fully recondition the tipple to an operable state, actually run coal through the processing units and allow visitors to walk through the building to observe the various operations involved.

The initial costs and the operation and maintenance expenses of these alternatives differ dramatically. These cost elements are estimated as follows.

Option A would involve initial costs of roughly $18,000 for the tipple and about $14,000 for the trestle based upon cost estimates provided under Alternative III. The bridge on the east side of the tipple should be reconstructed to the extent that it would appear authentic. It would not have to be strong enough to support a rail unit, but ideally should serve as a pedestrian walkway to the top of the tipple. The cost should be approximately $10,000. Miscellaneous cosmetic work not budgeted in the Alternative III cost estimates would be necessary to make the tipple appear authentic. These costs are estimated at about $2,500. The total cost is estimated at roughly $44,500. This includes $14,000 for trestle work.

Maintenance costs of the tipple and bridge units would primarily consist of repainting every six to twelve years. The 1975 cost of this work would be roughly $8,500. Based on an average life of nine years, an annual reserve allowance of approximately $800 per year appears reasonable. (using 5% sinking fund factor).

Option B would involve essentially all of the cost of Option A plus the costs of walkways, safety items, comfort control systems, minor work to the tipple machinery and whatever interpretive displays or narrative devices that would be necessary. An elevator would be an option within this option. The tipple plans indicate there are approximately 2,500 square feet of walk space and steps in the tipple and crusher house. These areas were originally covered with three inch thick wood flooring, much of which is now deteriorated or missing. For safety reasons, all flooring should be replaced

in all areas where visitors will walk. A cost of $1.25 per square foot of flooring material is used in these estimates. It would be unnecessary to allow visitors to walk through all parts of the building. In this analysis, it is assumed that about 250 linear feet of walkways, mostly four feet in width, will be sufficient to give visitors a reasonable view of the tipple and crusher house machinery. As much as possible, old lumber should be used on the remaining floor space which would be blocked from public access.

The labor and hardware costs of relaying the existing flooring material is estimated at roughly $.25 to $.30 per square foot. The cost of new flooring plus the necessary labor is estimated at $1.50 per square foot. It is assumed that 50 per cent of the 2,500 square feet of flooring is salvageable and the remainder must be new material. A total cost of approximately $1,875 is estimated for the flooring. No maintenance costs should be involved here. ?

Safety railing with protective screening between the floor and top rail would be required in all areas accessible to visitors. If 250 linear feet of walk space are to be protected, about 260 linear feet of railing would be required. Depending upon the type of rails to be used, the material and installation cost would be roughly $5.00 to $15.00 per linear foot. Using the mid-point of this range, a cost of approximately $2,600 is indicated. Costs might vary beyond this figure depending upon the type of railing selected. Maintenance costs would consist of periodic painting -- say $25 per year. If an aerial walkway is to be built between the tipple and crusher house, the cost would likely be about $6,000. This bridge would improve the circulation qualities of the walking tour, but it is not considered essential.

Because the tipple is a metal building exposed to direct sunlight, it would be uncomfortably hot inside on sunny days. The heating and air conditioning specialists contacted, felt that a "spot cooling" process would be the most feasible method of cooling the tipple. In this process, small cooling coils with high velocity blower units are placed eight to twelve feet above the walkways. Approximately 10 tons of air conditioning would be required to cool the approx. 1,000 square feet of walk space being considered. The initial costs would be approximately $7,500. These units would draw approximately six to twelve KW of electrical current which would probably result in daily operation costs of roughly $1,50 to $3,25 during summer months or about $250 per season. Additional costs such as mechanical maintenance and repairs would be low during early years of use, but would gradually rise. Reserves for replacement must also be considered. These costs are estimated to average approx. $400 per year. The total expense is indicated to be $650 annually.

It is difficult to say what costs would be incurred in restoring the tipple machinery to an authentic appearance. Most of the mechancial system with the exception of electric motors seems to still be in place, therefore, these costs should not be extensive. It would be best to leave the machinery in a dirty state since this is the way it would appear in actual operation. Placing coal in the various stages of processing in the proper respective positions on conveyor belts would be good. This way the observer could more easily understand how the tipple actually works. The costs of making the inside of the tipple authentic in appearance should be not more than about $1,000.

Lighting fixtures would also be required. An allowance of $600 should be made for the lights and necessary wiring. Operation and maintenance costs of roughly

$150 per season is used.

The tour of the tipple could either be by guide or by signs and possibly taped recordings. The initial costs of signs should be no more than about $250 and the tape machines would cost about $250 each or $1,250 for five units. Maintenance and replacement reserves are estimated at $100 per year. A tour guide would of course be more costly but would serve as a guide to other parts of the community.

A hydraulic elevator would cost $35,000 to $50,000 to install at the side of the tipple according to an Otis Elevator Company sales representative. The power consumption would be $50 to $60 per month with regular use or $25 to $40 per month for relatively light usage. The monthly maintenance contract would cost approximately $100 per month. The operation and maintenance cost during the typical season would be approximately $1,500.

In summary, the initial cost of Option B before contingency reserves is estimated to be roughly $58,575 without a bridge to the crusher house; about $64,575 with the bridge; and $99,575 to $114,575 with the elevator. Trestle costs of $14,000 are included. A contingency allowance is included.

Annual operation and maintenance costs (excluding staffing) are estimated on a preliminary basis to be about $2,000 without the elevator and about $3,500 with the elevator.

It is questionable whether the elevator is worth the additional costs. The visitors could enter the tipple from the top via a walkway and gradually descend to ground level via the stairs. During the tour of the tipple, the tram could be driven from the entrance level to the lower level and be waiting for the visitors as they leave the structure. In this way, it would be unnecessary for anyone to climb stairs. This strategy would,

however, make it difficult and in some cases impossible for the elderly, invalid, and small children to tour the entire tipple.

Option C would involve completely renovating the tipple machinery to operable condition and running coal through the various processes. There are several obvious problems with this option.

The initial cost of putting all machinery in working order would be great. New electric motors, new wiring, pumps for the water sprayers, and replacement of miscellaneous deteriorated, vandalized and stolen parts would be required. Mr. C.A. Peters with The Daniels Company, engineers in processing coal and other mine products, was able to provide considerable insight into the question of the costs involved. The Daniels Company is in the process of studying the renovation costs of a 750 horse power, 150 ton per hour tipple that has been abandoned for a number of years. Because there are many more safety and environmental requirements in force today, it is necessary to install many devices that previously were not required. The Daniels Company has estimated the renovation costs of this tipple at $200,000. Mr. Peters felt that a cost of $150,000 to $250,000 should be anticipated for the tipple at Blue Heron. Mr. Peters further advised that the restored tipple would not be adapted for the coal that is mined today. More impurities such as clay and soil are generally mixed with today's unprocessed coal and these must be removed. In summary, the investment of $150,000 to $250,000 would not yield an efficient coal processing device.

Another inefficiency that the Blue Heron tipple would encounter is the need to ship unprocessed coal from other mining areas into Blue Heron, run it through the tipple, and then ship the processed coal back out of the site. This would obviously be an expensive practice due to the extra shipping costs involved.

If visitors were to observe the tipple in operation, it would probably be necessary to seal off the walkways and install tempered glass between the deck and the machinery. Otherwise, coal dust would settle on the visitors, noise would be a problem, and there would be the danger of injury from pieces of coal that might be thrown from the mechanism. The cost of this operation would be $4,000 to $7,000 for the glass material alone, plus the expense of the enclosure itself. A total cost of $10,000 to $20,000 would probably be encountered. This glass would require frequent washing, thereby creating additional maintenance costs. Including certain cost factors covered by Option B, it appears that a total cost of $200,000 to $275,000 would be encountered.

The operation ond maintenance expenses of an operating tipple would be great. Three to four men would be required to operate the tipple on a limited production basis and as many as ten would be required for full production. Assuming only a limited production status, the labor costs to operate the tipple for a three month period would be more than $10,000. Consumption of power during a three month period would be $500 to $1,000 on a low production assumption. The cost of machinery repairs would also be a factor here. Total operation and maintenance costs would probably be in the $15,000 to $30,000 range assuming that the tipple were operating on a low production basis. The additional costs of shipping the coal into and out of the site would likely render this option entirely infeasible from an operating economics point of view. Also, the initial cost factor would be great.

Selection of Option A, B, or C is based upon an evaluation of the costs relative to the benefits created. Certainly an operating coal tipple as considered under option C would be more interesting than either A or B, but its initial cost and annual operating expenses make it impractical. Option A would

be least expensive, but little educational benefit is offered by only an exterior view of the tipple. Option B seems to be the best strategy. Although the machinery would not actually operate under this option, the visitor could see the coal in various stages of processing. A film in the museum could show an actual tipple in operation so that the visitor would better understand the processes involved before entering the tipple itself. Thus, an initial cost of approx. $65,000 is indicated (assuming the elevator is not included) and an annual operation and maintenance cost of approx. $1,725 is estimated. The operation and maintenance costs do not include the payroll costs of guides, janitors, etc. These costs can be best determined with the selected plan.

Pedestrian Bridge Over River. The trestle which extends from the tipple to the west side of the Big South Fork is one of the few, if not the only, possible access routes to the scenic area on the west side of the river. For this reason, it makes good sense to consider making a pedestrian walkway over this structure. The cost of installing a pedestrian bridge on the east side of the tipple and placing new decking on top of the tipple itself has already been budgeted in cost estimates for the tipple restoration. The cost of protective screening and railing over the west half of the tipple has not been figured. Assuming roughly 45 linear feet of walk space on top of the tipple requires protective railing, approximately 90 to 110 linear feet of rail and screening will be required. An observation area with commercial telescopes would be placed at the center of the bridge.

The trestle itself is approximately 670 feet long and ten feet wide. It will require all new decking as well as safety railing and screening. Roughly 6,700 square feet of deck material will be required. In steel this material would cost roughly $27,000 and in 4 x 12 inch pressure treated wood it would cost roughly $10,000. The installation cost would be considerably lower for wood than for steel. The cost in place for the wood deck is estimated at $12,500.

Protective railing of the quality level required here would cost $5.00 to $15.00 per linear foot installed. The 670 linear feet of railing necessary on each side of the trestle plus 90 to 110 on the tipple would cost $6,835 to $21,750. A most likely cost would be $13,000 to $16,000. The telescopes should cost no more than $1,000 to $1,500.

A rough cost estimate of the entire walkway system is estimated to be $30,000. Maintenance costs would be periodic painting of the railing system at an average cost of approximately $300 per year.

Utility Systems. Blue Heron will require its own water and sewerage service systems. It is assumed that electricity will be provided by a public utility company and no natural gas will be necessary.

The cost of the water system depends upon the depth to which a well must be bored to obtain an adequate water flow. At six to seven dollars per foot for a six inch shaft, the well cost would be approximately $650 for a 100 foot depth; $2,600 for a 400 foot depth; and $5,200 for an 800 foot depth. The cost of a pump, pump house, and water tank would probably be $2,000 to $3,500. Distribution lines would cost about one dollar per linear foot. It appears that if water consuming elements of the restoration

project are concentrated in one area, the cost of the water system should be no more than $9,000. If water is required in several areas, the cost would be higher.

The need for sewerage on the site should be satisfied by a septic tank system. A cost of approx. $4,500 is estimated for one large septic tank, a grease trap tank, and the necessary drain field lines. If sewerage service is required in several areas of the project, the cost of a small septic tank in each location would be $500 to $1,000.

Total cost of utility systems is estimated to be about $13,500. Maintenance costs would be largely dependent upon usage levels since the largest cost would be electricity to run the pump. Approximately $350 per year should be sufficient to cover electrical and other costs.

Landscaping. After the restored mining community is constructed, it will be necessary to replant grasses in areas where the soil has been disturbed. It will also be necessary to stabilize the soil in areas where the visitors will be walking. Small gravel or bark could be mixed with the soil to accomplish this. A cost of approx. $2,500 is estimated for this work. Maintenance would consist of mowing the grass and clearing the grounds of litter. These maintenance costs would be absorbed in project wide maintenance.

Amphitheater. An amphitheater can range in cost from as low as $10,000 to several hundred thousand dollars depending upon the size, topography, materials used, and extent of services offered. The most economical amphitheater is one which is placed in an area with topography that is already contoured into a semi-circular bowl configuration. It would be terraced and planted with grass and a small stage platform would be built and electrical service and lights provided. The visitors either bring lawn chairs or they can sit on the ground.

The more expensive amphitheaters are constructed of concrete and have more extensive services such as large flood lights, sheltered stage area, orchestra sections, etc.

An amphitheater can be used in numerous ways. A theatrical production is offered at some, such as the popular Unto These Hills program in the Great Smoky Mountains National Park. The operation cost of such a program is very high, because it must cover costs of costumes and actors' salaries. This type of offering might prove effective in the Blue Heron area, but it is not recommended as a part of the restoration project itself.

A simple amphitheater such as described previously might be incorporated into a campground area and small amateur productions could be offered, but this too is not recommended for the restoration project itself.

Summary of Alternative IV Cost Estimates. Cost estimates are offered below on a per unit basis. These figures are indeed rough-cut estimates, but should be useful for the comparative purposes for which they are intended.

Item	Initial Costs	Approx. Operation & Maintenance Cost
Parking Lot	$12,000	$10,000/every 15-20 yrs.
Rail Tram/Rail Line	$132,000/mile	$1,975/mile per year after first 20 yrs. of service (negligible during earlier years)
Battery Powered Tram Unit	$29,500	$1,100 to $1,500 per year
Minature Steam Train	$36,400	$2,000 to $2,900 per year
Rubber Tire Tram		
Tram Path		
surface treatment	$20,000/mile	$4,600/mile every 15-20 yrs.
asphalt	$34,000/mile	$9,250/mile every 15-20 yrs.

Item	Initial Cost	Approx. Operation & Maintenance Cost
Tram Unit	$16,000	$2,000/yr plus $1,300/yr reserve allowance
Steam Train into Blue Heron via Existing Rail		
Rail Improvements	$10,000±	
Steam Train	$157,500-$212,500	$10,500-$21,000/yr. (3 mo. season) $20,000-$39,000/yr. (extended season)
Structures		
Small Houses (400± sq.ft.)		Costs would depend upon staffing and usage levels. Shells would be less than one-half as expensive to maintain.
exterior shell	$4,000/ea.	
finished & furnished	$8,200/ea.	
Larger Houses (800± sq.ft.)		
exterior shell	$5,450	
finished & furnished	$11,200/ea.	
Mine Superintendent's House (1,250 sq.ft.)		
exterior shell	$9,000	
finished & furnished	$24,400	
Church (1,500 sq.ft.)		
exterior shell	$7,000	
finished & furnished	$16,000	
School House (800± sq.ft.)		
exterior shell	$5,450	
finished & furnished	$10,700	
Bath House (1,500 ± sq.ft.)	$15,000	

Item	Initial Cost	Approx. Operation & Maintenance Cost
Company Store		Operating Expense would depend upon mix of uses and staffing.
basic structure with 2 bath rooms, and air conditioning		
@ 1,000 sq.ft.	$21,000	
@ 2,000 sq.ft.	$35,500	
@ 3,000 sq.ft.	$49,500	
@ 4,000 sq.ft.	$64,000	
@ 5,000 sq.ft.	$79,000	
@ 6,000 sq.ft.	$94,000	
Plus:		
food services	$5,000	
gift shop shelving, etc.	$3,500	
reproduction of company store w/stock	$6,000	
museum finish		
basic version	$2,500	
extensive museum including theater	$20,000	
Tipple		
Option A (exterior finish only)	$44,500	$800/yr.
Option B (walking tour through non-operating tipple without elevator)	$64,575	$2,000/yr.
Option C (walking tour through operating tipple)	$200,000-$275,000	Prohibitive

Item	Initial Cost	Approx. Operation & Maintenance Cost
Nature Trails	$2,000/mile	Insignificant maintenance costs.
Pedestrian Access Over Trestle	$30,000	$300/yr.
Water and Sewerage System	$13,500	$350/yr.
Landscaping	$2,500	
Amphitheater	$10,000-$100,000+	Varies

Based upon these cost estimates, several conclusions are drawn. A surface treatment type of paving would be preferable to asphalt. A rubber tire tram would be preferable to a rail system primarily because of its superior climbing abilities and more flexible route possibilities. A steam train ride would involve heavy initial costs and high operating expenses. This train ride would have to offer a considerable incremental benefit to the Blue Heron restoration to justify its inclusion.

An intial and operation cost savings would be gained by constructing only the exterior shell of some structures at Blue Heron. Sufficient educational and public interest benefits would be gained by offering a walking tour through a very basic type miner's house, a more elaborate version of a miner's house and a mine superintendent's house. A walking tour of the church, bath house, and school house would also be interesting. The company store building would be an excellent location for such facilities as a fast food establishment, gift shop and a contiguous museum area. The museum would certainly be a worthwhile part of the restoration.

The tipple could be used in several different ways. It could be viewed from the outside only, an educational walking tour thorugh a non-functional tipple (with interpretive displays, etc.) could be offered or the tipple could be restored to operable condition and visitors would observe the processes from glass enclosed platforms. From a public interest point of view and in consideration of initial and operating costs, the walking tour through the non-operating tipple seems to be the best strategy.

A trail system through the Blue Heron area would be worthwhile. The pedestrian walkway over the trestle would provide access to the west side of the river. Camping

facilities would be worthwhile in the general vicinity of Blue Heron. They would not, however, need to be in the immediate Blue Heron area and certainly should not be on the Blue Heron site itself. Therefore, campground facilities are treated as options and are not figured in the total cost estimate.

The initial cost estimates of options selected for Alternative IV are summarized in Table 5. It is shown that Alternative IV would involve initial costs of roughly $600,000. Of these costs, approximately $75,000 are covered under Alternative III. It appears, based upon visitation projections for the National Area, that revenues generated by admission fees and concessions would be sufficient to more than offset annual operating expenses. Operating economics of the selected plan are evaluated futher in Section Ten.

Table 3

Cost Estimate for Recommended Uses in Alternative IV

Parking	
Install parking area for 150 cars in surface treatment	$12,000
Tram System (surface treatment paving)	
Tram path in gorge and through Blue Heron restoration	$30,000
Tram Vehicle	$16,000
Structures	
1-400 sq.ft. house (finished)	$ 8,200
4-400 sq.ft. houses (shell)	$16,000
1-800 sq.ft. house (finished)	$11,200
3-800 sq.ft. houses (shell)	$16,350
1-1,250 sq.ft. house (finished)	$24,400
1 church- 1,500 sq.ft. (finished)	$16,000
1 school house - 800 sq.ft. (finished)	$10,700
1 bath house (1,500 sq.ft.)	$15,000
1 company store (5,000 sq.ft.) (with authentic company store stock, a gift shop, fast food facilities, and museum with theater)	$115,000
Tipple restored under Option B Including repairs to trestle over river	$64,575
Miscellaneous structures such as powder house, work shop, storage house for tram, etc.	$50,000
Trail System	
4 mile trail system @ $2,000/mile	$ 8,000
Pedestrian walkway over trestle	$30,000
Utility Systems	$13,500
Landscaping and Soil Stabilization	$ 2,500

Safety Measures Covered Under Alternative III

Fence ten mines for bat habitants		$3,250
Seal 30 mines with concrete block		$7,500
Bat habitant study		$7,500
Remove scrap materials from site		$1,500
Fence tipple and trestle over South Fork River		$3,830
Remove ties from trestle over South Fork River		$1,200
Fence around trestle over Roaring Paunch Creek		$2,250
	Subtotal	$486,455
Contingencies		$113,545
TOTAL COST ESTIMATE		$600,000

Reasons for Selecting Alternative IV as Phase II

Reasons why Alternative IV was not selected as an initial phase have been given on Pages 8-25 and 8-26.

The reasons why Alternative IV is selected as an optimum Phase II program are offered below:

1. This alternative, a tourist attraction of historical and educational value, conforms well with the purpose of the National Area.

2. The local economy would be boosted by increased retail sales generated by Alternative IV.

3. This research has shown that a facility of the sort proposed in this alternative would be accepted by the public as a popular tourist and historical attraction.

4. The mix of offerings selected for Alternative IV have been chosen on the basis of maximum cost effectiveness with respect to initial costs and regular operating costs relative to benefits derived.

5. This alternative is the only one with revenue generating potential which allows it to more than defray the operating expenses associated with it.

6. This scale of attraction would not detract from the wild and scenic character of the gorge.

Selected Plan Summary

The selected plan consists of taking safety and preservation measures immediately after the site is aquired with restoration of the Blue Heron Mining Community to occur later, immediately before jurisdiction is transferred to the National Park Service.

SECTION NINE

THE SELECTED PLAN

OVERVIEW OF PLAN

The selected plan consists of two phases. Phase I covers the period prior to the opening of the National Area. It should commence immediately upon acquisition of the Blue Heron site by the Federal Government. Phase I is comprised of the safety and preservation measures set forth in Alternative III. In general, Phase I consists of sealing and fencing the open mines; clearing the site of scrap material; fencing the trestle over the river, removing the old ties and sand blasting and painting the metal structure; fencing and repairing the trestle over Roaring Paunch Creek, sand blasting and painting the metal structure; repairing the tipple exterior; and constructing a parking area.

Phase II begins with the opening of the National Area. Phase II is comprised of the restoration measures set forth in Alternative IV. Phase II consists of improving the interior of the tipple for a walking tour; converting the trestle over the river into a foot bridge to the west bank and into the tipple; constructing a mining community village to include several houses, church, school, company store, and museum; constructing a tram way from the parking area to the tipple; and constructing a nature trail system. Adding camp grounds is optional. Phase II should be completed before jurisdiction of the National Area is transferred to the Park Service.

The following sections discuss Phase I and II in more detail.

PHASE I

The goal of Phase I is to make the Blue Heron site safe for public use, improve the visual qualities of the site, and preserve the existing facilities for later restoration.

Mines

The drift mines in the Blue Heron area are to be sealed to prevent access. Some mines will be left open for the bat population and are to be secured with chain link fence and three foot high concrete block water barriers.

River Trestle

The trestle over the Big South Fork is to be fenced at both ends and at all supports to deny access to climbers and curiosity seekers. The old ties are to be removed from the trestle and the steel sand blasted and painted.

Roaring Paunch Creek Trestle

The trestle over Roaring Paunch Creek is to be fenced on both ends and around each support to prevent public access. Repairs to the wooden structure are unnecessary, but the metal support members are to be sand blasted and painted.

Tipple

The corrugated metal on the exterior of the tipple is to be replaced where needed and all glass windows are to be replaced. The support members are to be sand blasted and the entire exterior is to be painted. One set of exterior stairs is to be repaired for access by workers, and the base of the tipple is to be fenced to prevent climbing.

Maintenance

Approximately $200 per year is estimated for repair of minor vandalism to the tipple, trestles and fencing. There are long range maintenance costs connected with the tipple and the trestles. The tipple will require repainting in 6 to 12 years at a cost of approximately $3,000. Both trestles will also require repainting in 6 to 12 years at a total cost of approximately $5,000. While these costs are related to Phase I development, they will be incurred during Phase II, and should therefore be considered a part of Phase II maintenance.

Management

The Blue Heron project will be managed under the principles, policies, and guidelines developed for the National Area.

PHASE II

The goal of Phase II is to develop a facility that realizes the maximum feasible recreational and interpretive potential of the Blue Heron site. The land plan for Phase I development is enclosed as Appendix B.

Tram System

A rubber tire tram system is to be constructed to transport visitors from the parking area into Blue Heron. The tram is to operate along the section of State Route 742 north of the site and is to run along the existing road bed from the tipple area past Devil's Jump.

Visitors to the site will depart the tram at the east section of the trestle and will enter the restoration area through the tipple, which will be the first interpretive element of the tour. Upon completing the total tour of the restoration area, visitors will board the tram below the tipple and will be transported back to the parking area.

The tram unit consists of several small passenger cars pulled by an internal combustion powered tug comparable to those used at airports and at theme parks. The passenger cars are to be fabricated to resemble the coal cars used to transport miners.

An extension of the tram system is suggested to transport visitors to and from the lodge. However, this portion of the tram system is considered to be part of the lodge package and is not included in the cost estimates for Blue Heron.

Tipple

The tipple is to be improved for the purpose of a walking tour. The necessary safety and comfort measure are to be provided to move visitors through certain portions of the tipple, view the machinery, and listen to narrations concerning the step wise processing of coal, working conditions in the tipple and safety hazards. The tour may be conducted by a guide or may be self-guiding with mechanical narrations.

The required improvements to the tipple consist of reflooring the structure; installing interior lighting and air conditioning; cosmetic work to the interior and exterior to provide authentic touches; installing safety railing and screening where necessary; and providing interpretive signs and mechanical narration equipment. The exterior of the tipple will have been repaired under Phase I. The east section of the trestle from the tipple to the east wall of the gorge is to be rebuilt to provide a walkway for visitors from the tram to the tipple.

River Trestle

The trestle over the Big South Fork is to be equipped with wood decking and a fence along each side of the walkway. The trestle is to serve as a foot bridge for hikers and a visitor observation point into the gorge.

Mining Community Cluster

An authentic mining community with structures comparable to those originally at Blue Heron is to be constructed. The community is to be a cluster of buildings located just north of the tipple and out of the flood plain. The cluster is to include ten residential structures of the period. Included in the cluster will be a one-room miner's house authentically furnished for the walking tour, four one-room shell homes (unfurnished), one four-room miner's house authentically furnished, and three four-room shells (unfurnished). A mine superintendent's home is also recommended and is to be furnished in an authentic fashion. The tour of these homes is to emphasize the social and economic aspects of life in a mining community.

A church with the sparse furnishings of the period is to be part of the cluster as is a small (800 sq.ft.) furnished school house. These buildings are included for the purpose of interpreting the role of religion and education in the miner's life. A bath house is also recommended.

A company store is to be constructed and equipped with authentic fixtures and stock. The social and political role played out by miners in the company store is to be emphasized. It is recommended that the company store house a gift shop which is to retail authentic craft items as well as souvenirs. A food service with an authentic mining cafe motif is also recommended. A wing of the company store is to house a coal museum and small theatre. The museum theme should be that of the story of coal to include the processing procedure and the social aspects of community life. A theatre is recommended for the purpose of an educational film on aspects of community life that are not easily portrayed by the other facilities. The company store/museum is to be

approximately 5,000 square feet in size.

Miscellaneous structures such as an explosive shed, work shop, storage house for tram, etc. may be included.

Road 742

State Road 742 is to provide access to the Blue Heron Area. This road will have been widened and paved for access into the National Area. The parking area is to be expanded to provide parking for at least 100 vehicles and over-flow parking for 50 additional vehicles is to be provided for peak periods. These spaces are to be paved.

Hiking Trail

It is recommended that a trail be constructed through the knolls to the east of the site and into the tipple area. This section of the trail is to link with the old rail tram bed which runs along the river to Devil's Jump. This will form a trail system which can be linked to the major trail system in the National Area. Interpretive markings should be provided where appropriate.

Utilities and Landscaping

The facilities at Blue Heron will require waste treatment equipment and drinking water. The use of a septic tank and large drainage field should serve the need of waste treatment. A well and storage tank should provide a sufficient water supply.

Some landscaping will be required. Reseeding those areas disturbed by construction will be necessary. A gravel treatment to the walks in the cluster of buildings and tipple area is also recommended.

Lodge Package

A possible lodge site is reflected on the land plan. However, the lodge and its accompanying facilities are not included in the cost of the Blue Heron restoration and are viewed as a separate project. The possibility exists of linking the lodge to the Blue Heron site by extending the tram system to the lodge site. It would be advantageous to both the lodge and the Blue Heron restoration project if the two are linked by the tram system.

SECTION TEN

ECONOMICS OF THE SELECTED PLAN

INITIAL COST OF RESTORING BLUE HERON

The selected plan treats Alternative III as an immediate first phase program with Alternative IV to follow later as a second phase. As shown in further detail in Section Eight of this report, the initial cost of Phase I is estimated to be approximately $75,000 and the initial cost of Phase II is estimated to be approximately $525,000. Thus a total cost of approximately $600,000 is involved for both phases of the restoration project.

OPERATING BUDGET

Revenues

As expressed in the Selecting A Plan section the most likely level of visitation to the restoration project is 86,000 in 1980 and approximately 140,000 by the year 2000. Assuming that one third are children and admission fees are $1.00 for adults and $.50 for children, a gross revenue from admission fees of approximately $72,000 in 1980 and $117,000 in the year 2000 is indicated.

Concession sales revenues in the gift shop and in the food service areas would supplement admission fee revenue. Some comparative value exists in economic data received from Mr. Larry Stover, Recorder/Treasurer of the City of Beckley which operates the Beckley Exhibition Mine. Annual attendance averages 30,000 to 50,000 at this exhibit which is not located in a major activity area such as the National Area. During the past fiscal year, revenue from admissions was $48,000, food sales were $12,400 while gift and souvenir sales were $19,800. Thus, based upon roughly

45,000 visitors, food sales averaged $.275 per person and gift and souvenir sales averaged $.44 per person. Assuming a concession revenue of roughly five per cent on gross sales, a net revenue of $.014 per visitor for food and $.022 per visitor for gifts and souvenirs is indicated.

Applying these figures to Blue Heron attendance of approximately 86,000 in 1980, a gross revenue of $23,650 for food and $37,840 for souvenirs is indicated. Net income of approximately $1,200 from food sales and approximately $1,900 from gift and souvenir sales is indicated.

Combining revenues from admission fees with net concession revenues, a gross income of roughly $75,000 (rounded figure) is indicated for 1980 visitation projections.

Operating Expenses

Annual operating expenses would consist of three basic elements: (1) Operation and maintenance costs which occur each year, (2) reserve allowances for periodic work which is required on a longer term basis (e.g., every six years, every ten years, every twenty years, etc.), (3) salary expenses.

Rough estimates of operating expenses relating to each element of Alternative IV were provided in Section Eight. These estimates were formulated primarily for the purpose of making cost trade-off decisions between the various options within Alternative IV. Relative costs can be compared in this way, but the actual operating expenses of the project will depend upon the composition and size of its staff and the length of the operating season. Based upon the selected plan and the projected visitation levels operating expenses are estimated as follows.

OPERATION & MAINTENANCE COSTS AND RESERVE ALLOWANCE *

Estimated Operating Expenses of Selected Plan, Phase II

Parking Lot		$ 400	
Tram Path		300	
Tram Vehicle		3,300	
Finished Residential Units	2,450 sq.ft. @ $.30/sq.ft.	735	
Shells of Residential Units	4,000 sq.ft. @ $.10/sq.ft.	400	
Finished Church Bldg.	1,500 sq.ft. @ $.25/sq.ft.	375	
Finished School Bldg.	800 sq.ft. @ $.25/sq.ft.	200	
Bath House	1,500 sq.ft. @ $.10/sq.ft.	150	
Company Store & Museum	5,000 sq.ft. @ $.50/sq.ft.	2,500	
Tipple		2,000	
Miscellaneous Structures		750	
Pedestrian Walkway over Trestle		300	
Utility Systems		350	
Subtotal		$11,760	
Contingencies		3,240	
Total Operation & Maintenance Costs and Reserve Allowance			$15,000

Salaries

Two Rangers	$20,000	
Two Maintenance Men	16,000	
Summer Employees	6,000	
Total Salaries		$42,000

Total Effective Annual Operation and Maintenance Costs $57,000

* Replacement reserves are computed by applying sinking fund factors at 5 per cent annum based upon expected economic lives of various items.

Net Operating Income

The Blue Heron project would produce an annual net operating income of roughly $18,000 based upon most likely visitation levels and estimated operating expenses.

Economic Impact of Project on Local Economy

Jobs Created

The selected plan for the Blue Heron restoration project would provide employment for two rangers, two maintenance men and three to six summer employees. Employment by concessioneers would possibly increase this base somewhat. The seasonal nature of the project will leave it in almost a caretaker status during the months of November through March, while June through August would clearly be the peak visitation period. Consequently the need for four full time employees is limited during the winter months. Recreational and educational attractions operating on a seasonal basis generally retain key employees on the payroll during slack months, often using these periods for maintenance work that would be disruptive during peak visitation months. Thus, the selected plan should provide year round employment (exclusive of concessioneer's employment) for four persons and summer employment for three to six persons.

Payroll

The payroll of the Blue Heron project is estimated on the basis of annual salaries of approximately $10,000 for each of the two rangers, $8,000 for each of the two maintenance men and hourly salaries of roughly $2.15 for 9 summer employees.

Total payrolls are estimated to be roughly $42,000 per year. Concessioneers' payrolls would increase this figure somewhat, probably to about $50,000 to $60,000 per year.

Retail Sales from Visitors

In estimating the visitation levels of Blue Heron, a capture rate of the National Area's visitors has been applied. These are persons that would likely be in the general area regardless of whether Blue Heron is restored or not. The primary effect that the restoration project will have on the local economy will be to bring more of the recreation area's visitors into the local or immediate area and cause them to spend a greater period of time there. In this way the local economy will be boosted by greater tourist expenditures for food, lodging, souvenirs, etc., than otherwise would occur.

The expenditure patterns of visitors in the Great Smoky Mountains National Park are instructive for the purpose of estimating retail sales that would be generated by tourists in the National Area. Both recreation areas are located in the Eastern Kentucky/Tennessee area, have comparable market areas, have comparable offerings, and therefore should experience similar visitor expenditure patterns.

A visitor sampling survey conducted in the Great Smoky Mountains National Park during 1974 by Amusement/Recreation Marketing Services, Inc., of New York indicates the following expenditure patterns:

Table 4
Average Daily Expenditure Patterns Per Car
Great Smoky Mountains National Park

Expenditure Category	Daily Average Expenditure In-Region Visitors	Out-of-Region Visitors
Gasoline	$10.31	$10.92
Food	20.53	17.90
Hotel/Motel	27.63	23.66
Campsite	5.18	5.41
Gifts/Souvenirs	12.52	17.75
Admission Fees	10.70	9.55
TOTAL	$86.87	$85.19

SOURCE: Amusement/Recreation Marketing Services, Inc., New York, New York, as revealed in visitor sampling survey, 1974.

The Blue Heron visitation projections offered in Section Eight of this report indicate the following visitation levels:

	1980		2000	
	Persons	Vehicles 1/	Persons	Vehicles 1/
Low Visitiation Projection	68,800	22,933	111,800	37,267
Most Likely Projection	86,000	28,667	139,750	46,583
High Visitation Projection	103,200	34,400	167,700	55,900

1/ Based upon the average of three persons per car.

The total annual expenditures of visitors to the Blue Heron project are estimated on the basis of most likely visitation levels and the expenditure patterns for visitors from out of the local region. Refer to the table below for data on expenditures of Blue Heron visitors. Note that these visitors are estimated to spend slightly more than $2.44 million in 1980 and almost $3,07 million in the year 2000 (1975 dollars).

Table 5
Annual Expenditures of Visitors to Blue Heron 1/
(Expressed in 1975 dollars)

Expenditure Category	1980	2000
Gasoline	313,044	508,686
Food	513,139	833,836
Hotel/Motel	678,261	1,102,154
Campsite	155,084	252,014
Gifts/Souvenirs	508,839	826,848
Admission Fees	273,770	444,868
TOTAL	$2,442,137	$3,968,406

1/ Most likely visitation level multiplied by average expenditure by category as shown in previous tables.

NOTE: Columns may not add to total due to rounding. Total is figured by multiplying total visitation times average expenditure rather than sum of column.

The local economy will certainly be boosted by increased tourist traffic generated by the National Area even if Blue Heron is not restored. The economic impact of Blue Heron will be realized by more people staying in the local area for longer lengths of time. The tour of Blue Heron would require at least one hour and would probably involve two hours or more. A greater propensity will exist for tourists to eat, shop, and seek lodging in the local area (provided that adequate facilities exist). Assuming that Blue Heron would cause twenty to forty per cent of its visitors to remain in the local area for one day's visit rather than only passing through, the impact on the local economy could be as great as one-half to almost one million dollars per year in 1980 and eight hundred thousand to more than one and one-half million dollars per year by the year 2000. If adequate facilities in the form of shops, restaurants, lodging facilities, etc., are not provided, the impact on the local economy would of course be much less.

The increased retail sales generated by the restoration of Blue Heron would increase payroll levels in the general area in addition to those noted for the project itself.

Non-Economic Impact on Local Area

With the exception of the two points stated below, the Blue Heron restoration project would have little non-economic impact on the local area. First, greater traffic congestion on collector and arterial routes would result. For this reason, road improvements will be necessary in certain areas.

Second, the influx of tourists into the area may cause some social friction between "strangers" and natives. This is viewed as a minor problem only.

In general, the non-economic impact of the Blue Heron project is negligible. Its role as part of the larger recreation area is supportive.

SECTION ELEVEN

DIVISION OF RESPONSIBILITIES

Phase I and Phase II construction are to be carried out by the U.S. Army Corps of Engineers and are to be funded as provided in Public Law 93-251. The operation and management of Phase I facilities is to be handled under the program being developed for the National Area.

Upon the completion of Phase II construction, the responsibility for the operation and management of the site is to pass to the National Park Service. All costs for management and operation of the completed project are to be carried by the National Park Service.

SECTION TWELVE

PLAN IMPLEMENTATION

The steps involved in bringing the selected plan to a reality are summarized as follows:

Phase I Planning

The present study is to serve as the basis for Phase I planning. The findings of this study should be expanded and refined by the National Park Service and the Corps of Engineers and should be transformed into a detailed plan for Phase I. The Phase I planning period should begin at once or should begin as soon as the site is acquired.

Pre-Management Planning

The pre-management planning period should commence during the latter part of Phase I planning. The goal of this phase is to establish a management procedure for the operation of Phase I. The participants in this process in addition to the Corps of Engineers should be the National Park Service.

Phase I Construction

The preservation measures of Phase I should commence upon the completion of Phase I planning. The Phase I construction period is expected to require only a few weeks of on-site work.

Management of Phase I

Management will be in operation approximately four years and will serve as an interim step between preservation of the existing facilities and the restoration of the mining community.

An on-going analysis of visitation trends is to be conducted during this period. The success of the restoration project is contingent upon a sufficiently high level of visitation to the National Area. It is during this observation period that the probable level of visitation to Blue Heron is to be established. If it appears during this period that the projected visitation to the site is fairly accurate then the Blue Heron project should proceed to the next phase.

Phase II Planning

The planning of Phase II is to commence as soon as the projected visitation to the National Area is determined to be accurate and should begin in time for construction to be completed before transfer of the National Area to the National Park Service. Phase II planning should be conducted in close cooperation with the National Park Service in that they will operate the Blue Heron project. The findings of the initial Blue Heron study will serve as the base for Phase II planning. The input of the National Park Service and the observed visitation levels to the National Area will provide the parameters within which the final plan is developed.

Phase II Construction

Construction of Phase II will take approximately 6 months to complete and will be finished before transfer of the National Area to the Park Service.

Turn-Over Phase

Upon the completion of Phase II construction, the responsibility for the operation and management of the Blue Heron site is to shift to the National Park Service.

SECTION THIRTEEN

VIEWS OF NON-FEDERAL AGENCIES

The views of non-Federal interests were gathered by interviews and the mail survey. Among the non-Federal groups sampled in the survey are major coal producers, local coal companies, State and local officials, State agencies, conservation groups, motel and lodge operators, tourists, Chambers of Commerce, and mining union officials. Among the non-Federal groups interviewed are the Kentucky Department of Natural Resources, operators of comparable projects, and representatives of various fields familiar with the cost of construction and operation aspects of the project.

In general, the vast majority of those surveyed and interviewed showed support for a restoration project at Blue Heron. The trend for restoration in a manner that does not detract from the scenic nature of the gorge. It is felt by the majority of those interviewed and surveyed that the project should appeal to a wide range of people through both recreational and interpretive (educational) offerings. There is strong opinion that the original character of a mining community should be maintained and the topic of mining community life should be presented in a realistic manner.

The development of the selected plan has been carried out within the scope of the above views. Those uses which are not in keeping with the general theme of realism are not included in the selected plan. Facilities and activities that would detract from the scenic character of the gorge or would adversely affect the historic and interpretive nature of the site are excluded.

SECTION FOURTEEN

REVIEW OF OTHER FEDERAL AGENCIES

The National Park Service is the only federal agency other than the U.S. Army Corps of Engineers that will have a major role in the Blue Heron project. In that the National Park Service will be responsible for the operation and management of the site upon completion of Phase II construction, a major effort is made to incorporate the National Park Service's views into the selected plan.

In general, the National Park Service has not shown strong support for a major restoration project at the Blue Heron site. The lack of support for a very large project results from the fact that the National Park Service does not wish to assume a project that will require large budgetary allocations for operation. This point of view weighs heavily in the formulation of a selected plan. The operational cost of each use is analyzed in detail and those facilities with very high operation costs, such as an operating tipple, are excluded from the selected plan.

The selected plan is on the scale that is easily managed within the National Park Service's organization and will be covered in the operation and maintenance plan for the National Area.

The selected plan is the most efficient plan of action for the site and yields the maximum net benefit from the cost of construction and management.

SECTION FIFTEEN

CONCLUSION

The purpose of this study has been to determine the most appropriate use of the Blue Heron Mining Community site as part of the Big South Fork National Area. The research data contained herein indicate that a restoration program at Blue Heron is feasible and desirable and that the selected plan represents the best restoration alternative. Field surveys of the site, prior studies of the National Area, maps of the area, interviews with various groups, an attitudinal survey testing the opinions of the public and involved agencies and restrictions set forth in Public Law 93-251 have been considered in the selection of an optimum and most cost effective plan.

The recommended plan involves two construction phases. Phase I is to be executed immediately after site acquisition. This phase entails measures required to make the site safe for public use and preservation of existing site improvements that are in a deteriorating state.

Phase II involves the construction of a restored mining community as detailed in Section Nine of this report. It would occur immediately before jurisdiction is transferred to the National Park Service. The time period between the two phases would be about four years. An on-going analysis of visitation trends is to be conducted during this period. The success of the restoration project is contingent upon receiving a sufficiently high level of visitation to the National Area. It is during this observation period that the probable level of visitation to Blue Heron is to be established. If it appears during this period that the original visitation projections

APPENDIX A

MAIL SURVEY

and

SURVEY RESULTS TABULATION

LAND
DEVELOPMENT
ANALYSTS

BLUE HERON ATTITUDINAL SURVEY
Prepared in Connection With The
FEASIBILITY REPORT FOR RESTORATION OF THE
BLUE HERON COAL CAMP

1. Do you feel that the Blue Heron Coal Camp should be restored as a public facility?

   ☐ A. Yes.
   ☐ B. No.
   ☐ C. No opinion.

2. Which of the following orientations do you feel is most appropriate for the Blue Heron restoration project? (check one)

   ☐ A. Mostly educational--with emphasis on exhibits, narrated tours; and seif guiding tours.
   ☐ B. Mostly recreational--with emphasis on camping, canoeing and fishing.
   ☐ C. An educational/recreational mix.

3. Which of the following themes is most appropriate for the Blue Heron restoration project? (check one)

   ☐ A. Historical aspects of the settlement and growth of Eastern Kentucky and Tennessee, including coal mining.
   ☐ B. The architectural, cultural and social aspects of a coal mining camp.
   ☐ C. The procedures used in mining and processing coal.
   ☐ D. A combination of "B" and "C".
   ☐ E. The history and future of energy production and use in the U.S.

4. Which period should be emphasized in the restoration project?

   ☐ A. 1912-1927 -- The big boom years.
   ☐ B. 1927-1937 -- The Great Depression and era of decline.
   ☐ C. 1937-1947 -- The second boom.
   ☐ D. 1947-1960 -- Period of mechanization and population exodus.
   ☐ E. No specific period should be emphasized.

5. Should a narrated tour of an operating coal tipple be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

6. Should a walking tour of a restored mining camp including miners' homes, company store, school, explosives storage building, etc., be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

7. Should a tour of a restored or reconstructed mine be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

8. Should a museum be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

9. If a museum is included, which of the following themes should it have? (check one)

- ☐ A. The story of coal.
- ☐ B. The story of energy production and use.

10. Should nature trails including identification markers and information on selected species of trees, plant life and geological formations be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

11. Should a ride on an authentic train of the period be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

12. Should a ride on a small tram similar to the ones used to transport miners into the mines be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

13. Should an amphitheater be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

14. Should camping facilities be provided?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

15. If camping facilities are provided, which type of facilities would be most appropriate? (check one or more)

- ☐ A. Back pack primitive areas.
- ☐ B. Drive in tent spaces.
- ☐ C. Recreation vehicle spaces.

16. Should a lodge be provided?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

17. Should rental cottages be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

18. Should a restaurant be included?

- ☐ A. Yes.
- ☐ B. No.
- ☐ C. No opinion.

19. If a restaurant is included, should it have one of the following themes? (check one)

- ☐ A. Country food - family style.
- ☐ B. Fish camp.
- ☐ C. Mining camp cafe/saloon.
- ☐ D. Fast food service--no theme.
- ☐ E. No opinion.

20. Which of the following topics should be presented by an exhibit or tour? (check one or more)

- ☐ A. Geological aspects of coal.
- ☐ B. Geology of the Cumberland Plateau.
- ☐ C. Procedures used in removing and processing coal.
- ☐ D. Impact of coal mining on the environment.
- ☐ E. Hazards and safety measures in coal mining.
- ☐ F. Historical development of mining unions.
- ☐ G. Cultural aspects of mining camp life.
- ☐ H. Women's role in the mining camp.
- ☐ I. Childhood in a mining camp.
- ☐ J. Migration of immigrants to the Appalachian coal fields.
- ☐ K. Historical aspects of railroad construction into the Cumberland Plateau.

(Continued)

- ☐ L. Mountain crafts.
- ☐ M. Mountain music and dancing.
- ☐ N. Mountain folk lore, medicine and superstition.
- ☐ O. The history and future of energy production and use in the U.S.
- ☐ P. Others _____

_____

_____

_____

21. We are requesting that the respondent provide his or her name and the name of the organization or firm represented (if applicable). However, if for any reason you prefer to omit this information, feel free to do so.

Name _____
Organization _____
Address _____

_____

22. Use the following space for any comments you might wish to make.

Appendix A

Survey Results

		Total	Major Coal Producers	Local Coal Companies	State Officials	State & Federal Agencies & Organizations	Local Officials	Conservationists	Motels, Lodges & Tourists	Chambers of Commerce	National Park Service	Mining Union Officials	U.S. Officials from Kentucky & Tennessee	Comparable Projects	Other
# Mailed		655	84	26	22	31	62	62*	210**	13	21	72	22	4	26
# Delivered		607	81	23	22	31	62	20	210	13	21	72	22	4	26
# of Responses		112	11	8	4	13	12	10	16	2	11	12	3	2	8
% of Responses		18	14	35	18	42	19	50	8	15	52	17	14	50	31
QUESTIONS															
1	a	91	9	7	4	9	10	7	15	2	7	11	3	2	5
	b	13	1	1	0	2	1	2	0	0	4	1	0	0	1
	c	8	1	0	0	2	1	1	1	0	0	0	0	0	2
2	a	22	0	1	1	3	0	3	8	0	2	2	1	1	0
	b	18	0	0	0	1	6	1	5	1	1	1	0	0	2
	c	64	10	6	3	8	6	6	3	0	6	8	2	1	5
3	a	25	0	0	0	5	5	3	3	0	1	2	1	1	4
	b	14	1	1	1	3	2	1	0	0	2	1	0	1	1
	c	5	1	1	0	0	1	0	2	0	0	0	0	0	0
	d	51	7	5	2	4	3	6	9	1	4	7	1	0	2
	e	19	4	2	1	1	2	0	3	1	3	1	1	0	0
4	a	18	1	0	0	2	3	4	3	0	0	1	2	1	1
	b	8	0	1	0	0	2	1	2	0	1	0	0	0	1
	c	17	0	2	2	0	2	0	6	0	3	0	0	1	1
	d	6	1	1	0	0	0	0	2	0	1	0	0	0	1
	e	61	8	4	2	9	5	4	7	2	6	10	1	0	3
5	a	83	8	7	3	11	8	5	15	1	5	11	3	2	4
	b	16	2	1	2	1	3	3	0	0	4	0	0	0	0
	c	11	0	0	1	1	2	2	1	1	1	0	0	0	2
6	a	93	10	7	4	11	10	9	14	2	5	10	3	2	6
	b	10	0	1	0	1	1	1	0	0	4	0	0	0	2
	c	9	0	0	0	1	2	0	2	0	1	1	0	0	2

(Continued)

		Total	Major Coal Producers	Local Coal Companies	State Officials	State & Federal Agencies & Organizations	Local Officials	Conservationists	Motels, Lodges & Tourists	Chambers of Commerce	National Park Service	Mining Union Officials	U.S. Officials from Kentucky & Tennessee	Comparable Projects	Others
7	a	91	9	7	4	11	11	7	15	2	5	10	3	2	5
	b	10	0	1	0	1	0	1	1	0	4	0	0	0	2
	c	9	1	0	0	1	2	2	0	0	1	1	0	0	1
8	a	91	10	7	4	10	10	5	15	1	8	11	3	2	5
	b	11	0	1	0	1	2	3	0	1	1	0	0	0	2
	c	8	0	0	0	2	1	2	1	0	1	0	0	0	1
9	a	72	8	5	3	10	10	8	12	1	3	5	2	2	3
	b	29	3	2	1	2	1	0	4	0	7	6	1	0	2
10	a	86	8	6	3	6	12	9	14	2	7	8	3	2	7
	b	10	1	2	0	3	0	2	0	0	2	0	0	0	0
	c	14	1	0	1	4	1	0	2	0	1	3	0	0	1
11	a	76	7	5	3	6	9	5	13	0	7	10	2	2	7
	b	18	0	2	1	5	2	3	2	1	2	0	0	0	0
	c	15	3	1	0	2	1	2	1	1	1	1	1	0	1
12	a	85	9	6	2	10	9	8	13	1	7	10	3	1	6
	b	10	0	1	0	2	2	2	0	0	1	0	0	1	1
	c	11	1	0	2	1	0	0	2	1	2	1	0	0	1
13	a	39	3	2	1	3	9	2	8	1	3	2	1	1	3
	b	35	1	5	2	5	0	6	5	1	5	1	1	1	2
	c	34	6	1	1	5	3	2	3	0	2	8	1	0	2
14	a	78	7	4	4	9	12	4	10	2	6	10	2	2	6
	b	16	0	3	0	4	0	2	3	0	4	0	0	0	0
	c	14	3	1	0	0	0	4	3	0	0	1	1	0	1
15	a	29	1	1	0	4	4	2	3	1	7	3	1	0	2
	b	48	6	3	1	7	6	7	6	1	3	2	2	0	4
	c	50	4	3	3	4	10	2	4	2	2	8	0	2	6

(Continued)

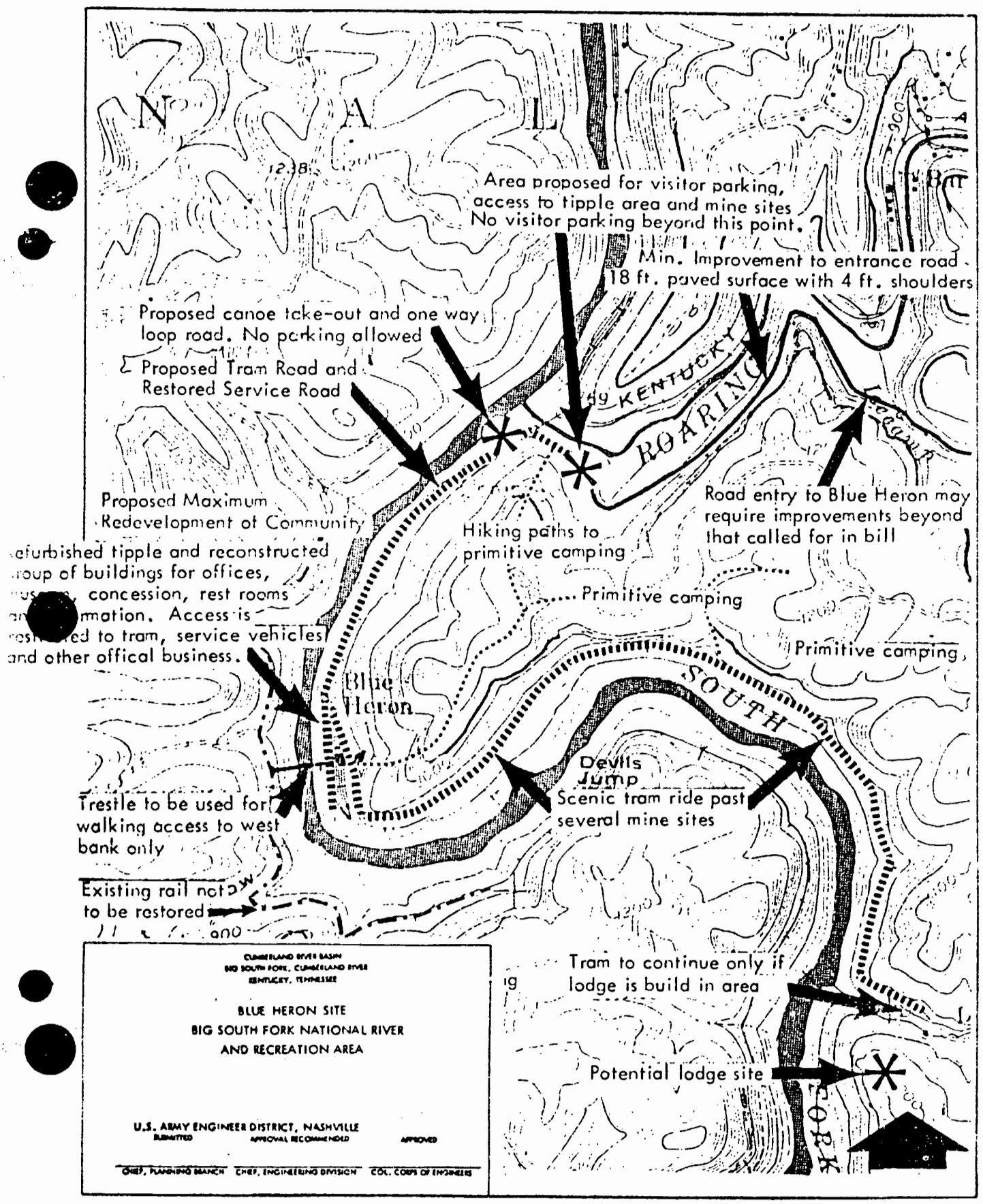
		Total	Major Coal Producers	Local Coal Companies	State Officials	State & Federal Agencies & Organizations	Local Officials	Conservationists	Motels, Lodges & Tourist	Chambers of Commerce	National Park Service	Mining Union Officials	U.S. Officials from Kentucky & Tennessee	Comparable Projects	Other
16	a	58	7	5	2	5	10	1	11	1	1	9	1	2	3
	b	33	1	3	2	5	1	6	3	0	8	0	0	0	4
	c	17	2	0	0	3	1	3	2	1	1	2	1	0	1
17	a	57	5	4	1	4	11	0	12	1	2	11	0	2	4
	b	35	3	4	2	3	1	8	2	0	7	0	2	0	3
	c	17	2	0	1	6	1	2	2	1	1	0	0	0	1
18	a	82	9	5	3	12	10	3	14	2	3	11	2	2	6
	b	17	1	2	1	1	1	5	1	0	5	0	0	0	0
	c	9	0	1	0	0	1	2	1	0	2	0	0	0	2
19	a	35	1	2	1	2	10	2	6	1	1	6	1	1	1
	b	2	0	0	0	0	0	0	2	0	0	0	0	0	0
	c	42	5	3	2	6	2	2	6	1	4	4	1	1	5
	d	8	3	0	0	1	0	0	2	0	1	1	0	0	0
	e	16	2	2	1	3	1	3	1	0	1	0	0	0	2
20	a	64	8	6	2	8	6	8	9	1	7	6	0	0	3
	b	40	5	2	0	5	1	8	5	2	5	3	1	0	3
	c	75	7	7	2	9	6	7	13	2	7	8	1	1	5
	d	52	5	5	2	8	2	7	6	1	8	3	1	2	2
	e	59	6	4	2	8	4	6	11	1	4	9	0	1	3
	f	27	4	1	0	6	0	4	0	1	3	7	0	0	1
	g	69	7	5	3	8	7	6	9	1	8	9	1	2	3
	h	48	6	2	3	7	3	6	6	1	4	5	0	2	3
	i	45	6	2	2	7	3	6	7	1	3	5	0	1	2
	j	32	5	2	1	6	1	3	2	1	5	4	0	1	1
	k	34	4	3	1	5	2	4	10	1	3	1	0	0	0
	l	42	3	2	3	7	6	4	5	1	2	3	1	2	3
	m	48	6	0	3	5	6	4	8	1	2	7	2	1	3
	n	36	3	2	3	5	4	4	5	0	2	4	1	1	2
	o	43	7	5	1	5	3	1	11	2	5	3	0	0	0

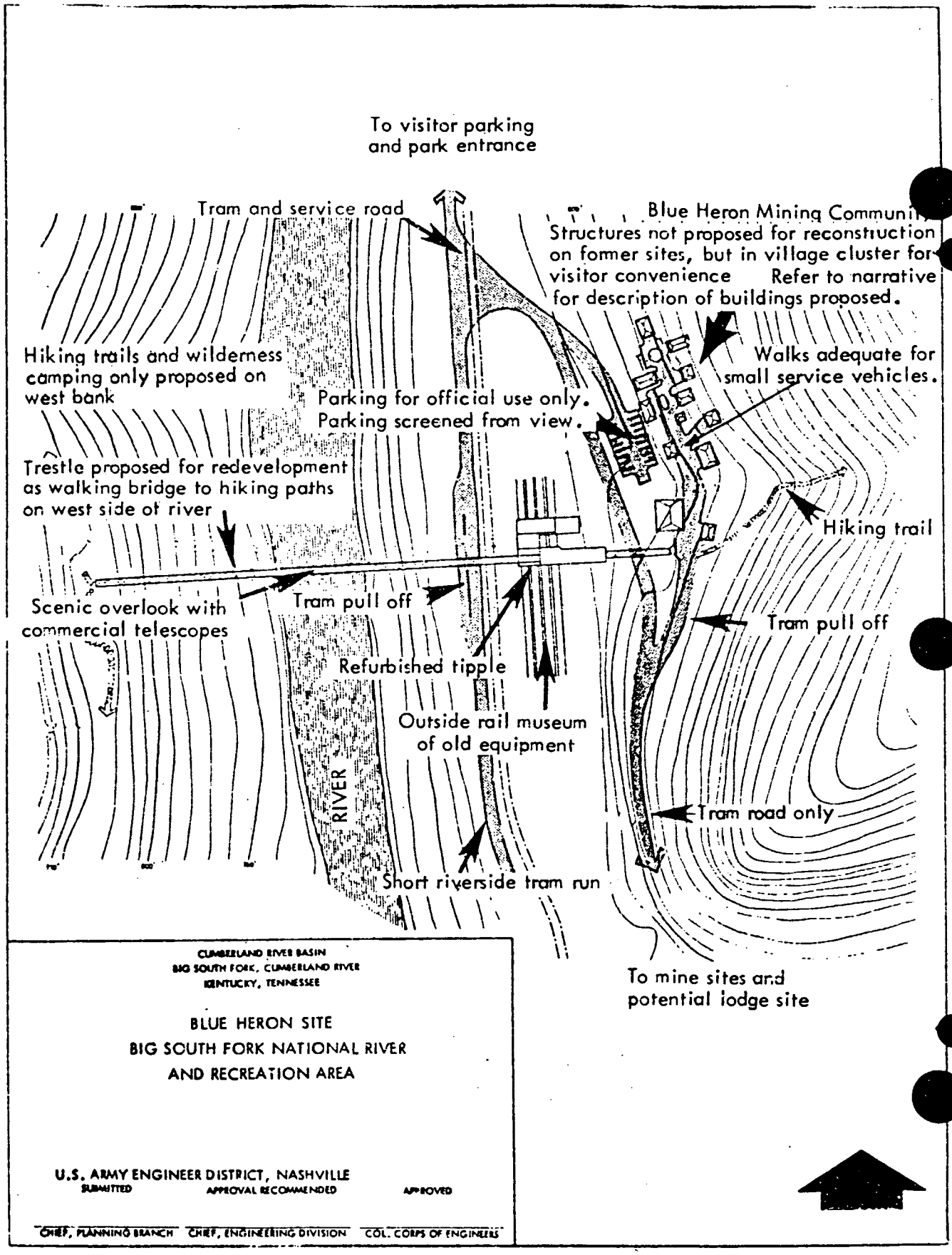
* In addition t[redacted]27 surveys mailed individually, 35 surveys [redacted] sent to Dr. Liane B. Russell to distribute to [redacted]ous groups.

** Forty-two mo[redacted] and [redacted]ges were sent 5 surveys each to be completed by their guests. The response rate [redacted] pro[redacted]ly inaccurate in that it cannot be determined how many guests actually received the survey.

APPENDIX B

LAND PLAN


Area proposed for visitor parking, access to tipple area and mine sites No visitor parking beyond this point.
Min. Improvement to entrance road - 18 ft. paved surface with 4 ft. shoulders
Proposed canoe take-out and one way loop road. No parking allowed
Proposed Tram Road and Restored Service Road
Proposed Maximum Redevelopment of Community
efurbished tipple and reconstructed roup of buildings for offices, concession, rest rooms mation. Access is restricted to tram, service vehicles and other offical business.
Hiking paths to primitive camping
Road entry to Blue Heron may require improvements beyond that called for in bill
Primitive camping
Primitive camping
Blue Heron
Devils Jump
Scenic tram ride past several mine sites
Trestle to be used for walking access to west bank only
Existing rail not to be restored
Tram to continue only if lodge is build in area
Potential lodge site
KENTUCKY
ROARING
SOUTH
FORK
CUMBERLAND RIVER BASIN
BIG SOUTH FORK, CUMBERLAND RIVER
KENTUCKY, TENNESSEE
BLUE HERON SITE
BIG SOUTH FORK NATIONAL RIVER
AND RECREATION AREA
U.S. ARMY ENGINEER DISTRICT, NASHVILLE
SUBMITTED
APPROVAL RECOMMENDED
APPROVED
CHIEF, PLANNING BRANCH
CHIEF, ENGINEERING DIVISION
COL. CORPS OF ENGINEERS



LAND DEVELOPMENT ANALYSTS

SPECIAL STUDY

PROPOSED
BIG SOUTH FORK
Blue Heron Mine

National Recreation Area / Kentucky–Tennessee

SPECIAL STUDY

BLUE HERON MINE

PROPOSED

BIG SOUTH FORK

NATIONAL RECREATION AREA

KENTUCKY/TENNESSEE

by

Russell Jones

DENVER SERVICE CENTER
HISTORIC PRESERVATION TEAM
NATIONAL PARK SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR
DENVER, COLORADO

April 30, 1975

PREFACE

This study was conducted by the Historic Preservation Team, DSC, at the request of the Southeast Region.

The study presents a description of the Blue Heron Mine community as it exists today. It proposes development with alternatives to fulfill restoration as set forth in the act establishing the Big South Fork Recreation area.

The act provides for the establishment and management of the national area for the purposes of preserving and interpreting the scenic, biological, architectural, and historic resources of the river gorge area and developing the natural recreational potential of the area for the enjoyment of the public and for the benefit of the economy of the region. It further provides for the restoration of the Blue Heron Mine community in a manner that will preserve and enhance the historical integrity of the community and will contribute to the public's understanding and enjoyment of its historical value. It also directs that no structures be constructed within the gorge except for reconstruction and improvement of the historical sites and for the necessary day-use facilities. It further states that access routes into the Blue Heron community may only be constructed or improved upon the present general route.

The Legislative Support Document for the Proposed Big South Fork National River and Recreation Area, prepared by the Denver Service Center, provides for a District Ranger Office, Visitor Contact, River Canoe Launch, Picknicking, Interpretation, Mine Stabilization and Residence to be located at the Blue Heron Mine site. The Blue Heron Mine area is planned as a day-use center only.

Lack of time prevented a search for documented historical data on the mine. Indications are that such information would be rather meager. Further intergration of the two former superintendents' interviews should produce valid historical information.

TABLE OF CONTENTS

BACKGROUND

According to information provided by Dr. Frank Thomas, president of the Stearns Coal and Lumber Company, parent company of the Blue Heron Mine, the original operation of the company in the area was lumbering. During that period coal deposits were discovered. When the timber supply was depleted the company expanded into mining.

The Blue Heron was the first mine opened and was known originally as Number One Mine. Later, when the company started to name their mines for birds, the name was changed to "Blue Heron."

The mine tipple and the trestle across the Big Smith Lock were designed and constructed by the firm of Allen and Garcia of Chicago, Illinois, in 1936-37.

Other mine buildings, the shops, sandhouse, bathhouse, supply building, and various small structures were probably constructed without benefit of construction drawings and specifications. The superintendent's residence and two or three of the larger quarters were constructed. The smaller quarters were moved in from other locations.

The Blue Heron continued to operate until 1962 when a decrease in the price of coal and an increase in mining costs made the operation unprofitable. Mr. Lemmie Wright, first superintendent of the mine, and Mr. J.C. Slaven, superintendent when the mine closed in 1962, were interviewed in addition to Dr. Thomas. Transcripts of these interviews are included in the appendix of this report.

It is unfortunate that I was not able to locate these two men in time to arrange for them to visit the mine site with me. Neither man has seen the site in several years and it is understandable that some of their recollections are cloudy in regard to the exact positions and details of the individual buildings. They have both volunteered to visit the mine site and provide more information. This should be done as soon as possible because both are in their late eighties, though very active and robust.

THE AREA

The Blue Heron Mine is located in west central McCreary County within the Daniel Boone National Forest on the east bank of the Big South Fork, the third largest tributary of the Cumberland River and one of the most spectacular white water rivers in the eastern United States.

The approach road to the Blue Heron is most interesting because it passes through valleys crossed by stream gorges and dotted with natural arches. There are only a few scattered homesites and small farms along the approach. Most of these have been abandoned and are rapidly falling into decay.

The region surrounding the proposed recreation area is economically depressed. Two coal mines and a lumber operation by the Stearns Coal and Lumber Company are the only developments of any size.

There are only three pockets of population: Revelo, a small hamlet some 8-1/2 miles from the mine site; Stearns, about 1 mile north of Revelo and 9-1/2 miles from the mine, an unincorporated town of less than 1,000. Here are located the office of the Stearns Coal and Lumber Company, the lumber yard, and one coal mine operation. A small tent manufacturing company completes the industrial list. The Kentucky and Tennessee railroad station is no longer in use; Whitley City, the largest town in the area, is located 2 miles north of Stearns and is the county seat of McCreary County with a population of 1,060.

A number of test wells for oil and gas have been drilled in McCreary County, but for the most part have not been commercially productive and have been abandoned.


FISHTRAP HILL RD.
Marshes Siding
Negro Cr.
CARTER RD.
WOLF RIDGE RD.
JONES SPUR
Hill Top
Lick Cr.
WHITLEY CITY
HICKMAN CEM. RD.
Smith Town
PINE RIDGE RD.
COFFEY
Yamacraw
WILSON RIDGE CH.
Worley
Stearns
WORLEY RD.
BOYD CH.
TENNESSEE
Barthell
Cooper Br.
Revelo
Comargo
Blue Heron
Hickory Grove
FOSTER RD.
BLUE HERON RD.
Laurel Br.
LAUREL
BEECH GROVE CH.
Big Spring Hol.
Laurel Crossing
RIVER
LEE RD.
HOLLOW
Blair Cr.
ROSS GROVE CH.
Smith
BOWMAN RD.
Pouncn
Pine Knot
MUD
CUT
LONG RIDGE RD.
TOM MEADOWS
OTTER CR. CH.
Salt Br.
TAPPLEY RIDGE
Bear
Tappley
Dardy BR.
Turkey
SECOND
MT PLEASANT CH.
Alder
KINGTOWN
PAUNCH RD.
SLAVEN KNOB
Slavens Br.
Fork
BILL
Jenneys
STEVENS RIDGE RD.
WATSON RD.
Bridge
CABIN RD.
APPLE
Laurel
McCREARY
RESERVOIR
PINE TREE RD.
JOB CORPS CENTER
MEADOW GROVE CH
TRAILER PARK
Sweet Gum Br.
HICKORY GROVE
PINE KNOT
SHORT RD.
CHEWFORD
Silerville (Strunk
SILERV CH.
THE
KING CE
1651
1363
701
92
2278
2279
27
791
683
684
741
1567
742
700
478
1470

THE PEOPLE

The population of McCreary County is 12,548. For the most part the inhabitants live on household farms or in very small rural communities. Although most of the population lives on farms, the land is not generally suited to productive farming. Farm residents are usually employed in mining, lumbering, or in the manufacturing of clothing in nearby communities. Products from these small farms are primarily for family consumption. Truck farming, livestock, poultry, dairy products, and tobacco are the principle sources of farm income. The base per capita income for the county is estimated as under $1,130.

ACCESS TO THE BLUE HERON MINE

The only vehicular access to the mine site is over the historic road constructed by Stearns Coal and Lumber Company for mine use. For the most part it is a low grade, single lane, unpaved road, unsafe for public use.

A second access is the Kentucky and Tennessee Railroad, which was constructed by Stearns Coal and Lumber Company to transport coal from the Blue Heron. The main line is still owned and used by the company.

A road for vehicular traffic will be necessary for park and public use in connection with the proposed development at the Blue Heron sites. This could foster a serious problem in the vicinity of the mine site because of limited parking space.

The K&T spur from the main line to the tipple has been abandoned. With the exception of one switch, most of the spur and all of the mine siding rails are missing. The existing track is in poor condition with rotted ties and an eroded roadbed.

The number of private vehicles could be greatly reduced by providing visitor transportation from Stearns to the mine by train over the existing track. Such a trip would be extremely attractive if a steam locomotive and observation-type cars were used.

Development of the Blue Heron Mine site, proposed in the legislative support document, as both a recreational and historical facility

presents a twofold problem. Picnicking, hiking, canoe launching, and fishing require vehicular access, but the designation of the mine as a restored historical exhibit considers vehicles an intrusion.

This situation would indicate that any recommendation for development must be a compromise.

Recommendation for Access Development:

Until such time as the public impact on the Blue Heron Mine site can be evaluated, it is recommended that the unsurfaced section (5.3 miles) be improved to provide the only access to the site. Improvements are to include widening the road to permit safe passage.

Alternates to the Recommended Action:

A. Improve the road as proposed by the recommendation above but stop public traffic near the plate girder bridge approximately .6 of a mile north of the mine site. Provide parking at that location. The public would proceed on foot to the mine site and beyond.

B. Same as Alternate A, but restore the railroad track from the parking area to the mine site and provide transportation by Donkey Mine Engine and observation-type cars to the mine site.

C. Minimal improvements to unsurfaced section of access road to provide safe passage for nonpassenger vehicles only. Provide public transportation from Stearns to the mine site by train, either diesel or steam locomotive. A period steam locomotive would be more desirable. This

proposal would require negotiations with the SC&L Company so as not to interfere with their coal operation.

Recommendations regarding the railroad for access would depend on the acceptance of the alternates involving its use in the transportation of visitors.

Should the railroad not be involved in people-moving, it is recommended that the existing tracks, roadbed, and plate girder bridge be stabilized to prevent further deterioration. The site and extent of the mine sidings would be marked.

Alternates to the Recommended Action:

A. Restore all trackage complete with rails and ties from the plate girder bridge, including sidings and loading spurs at the tipple. All are to be complete with operating switches.

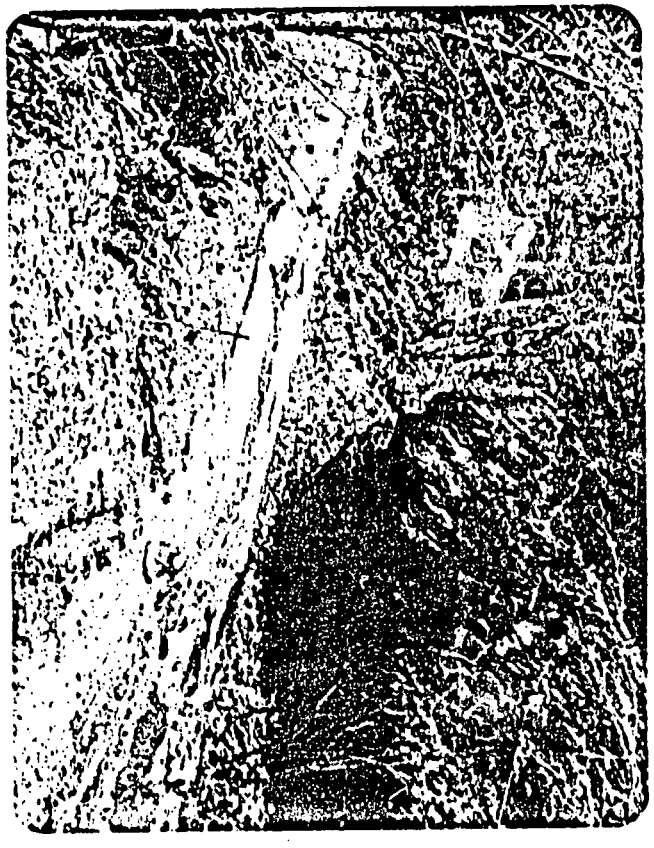
B. In addition to the recommendation, restore the loading spurs complete with operating s ..es as necessary to provide the visitor with an understanding of the loading operations.

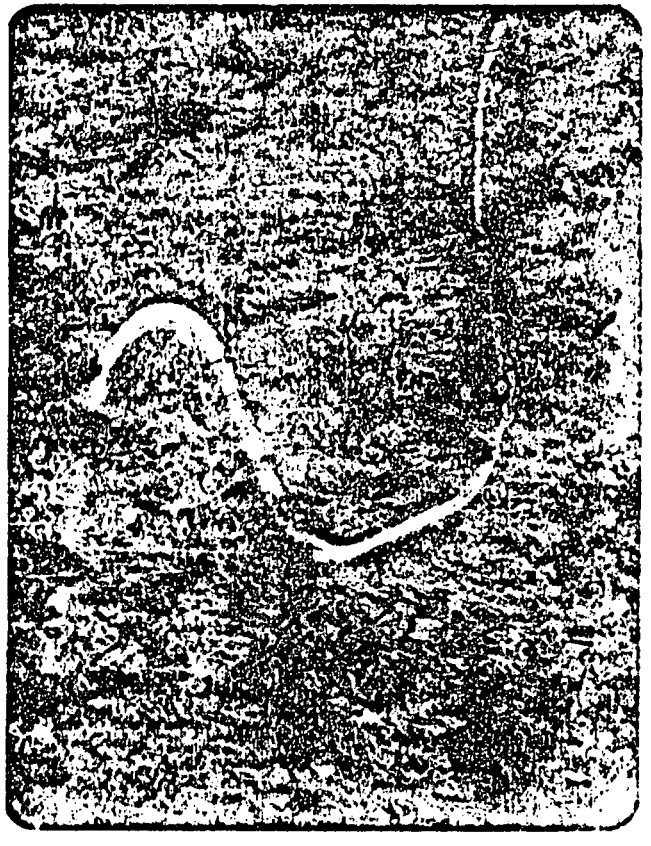
NO. 1

The only public access to the Blue Heron Mine is a 9.5 mile narrow, winding road. Only 4.2 miles of it is surfaced.

NO. 2

The unsurfaced portion of the road receives no maintenance. Washouts make it very dangerous.



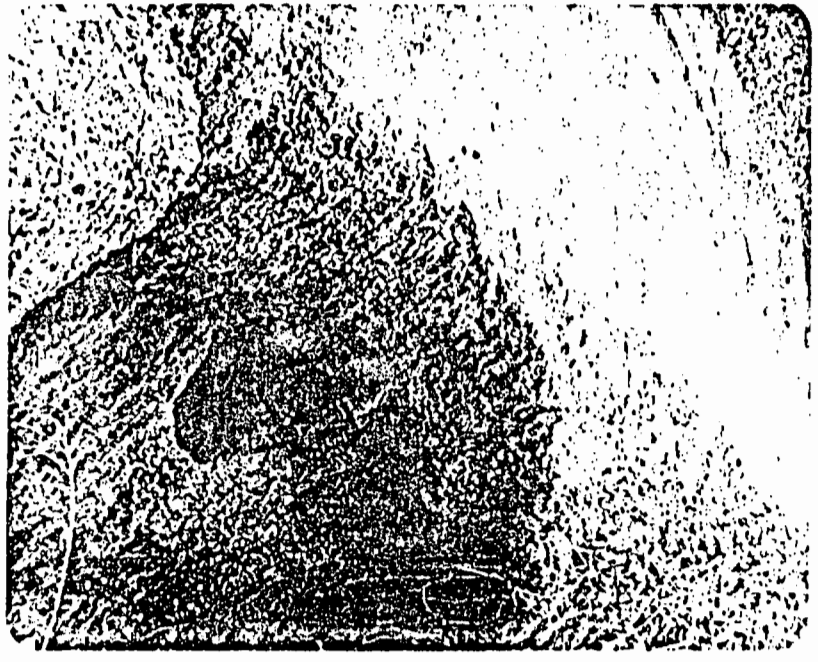


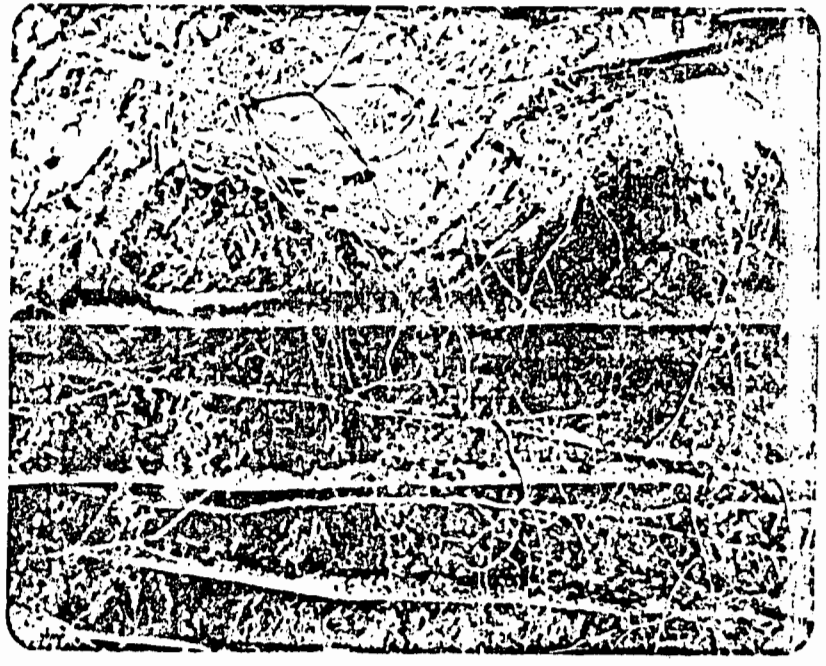
NO. 3

Drop-offs such as this can prove fatal.

NO. 4

A close-up view of an unusual washout at the edge of the road.



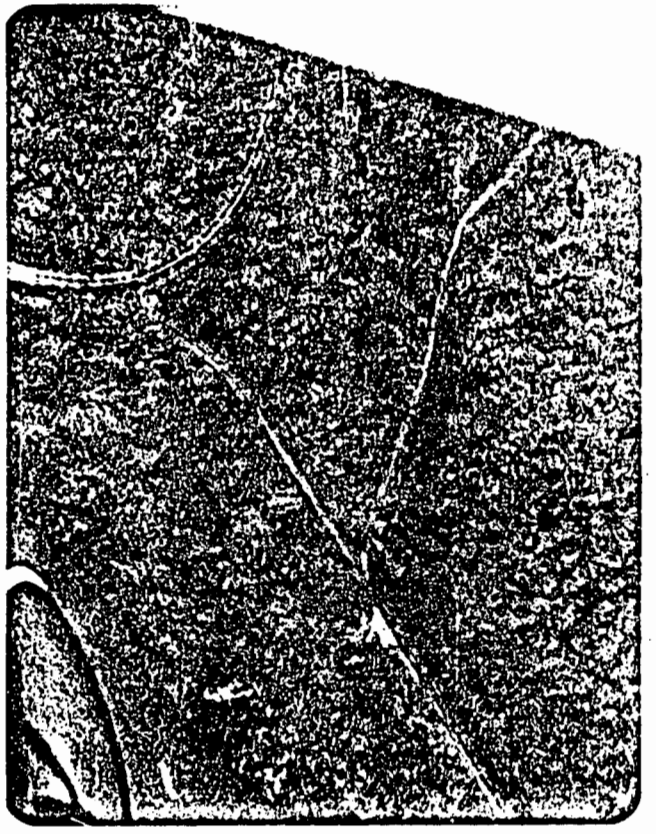


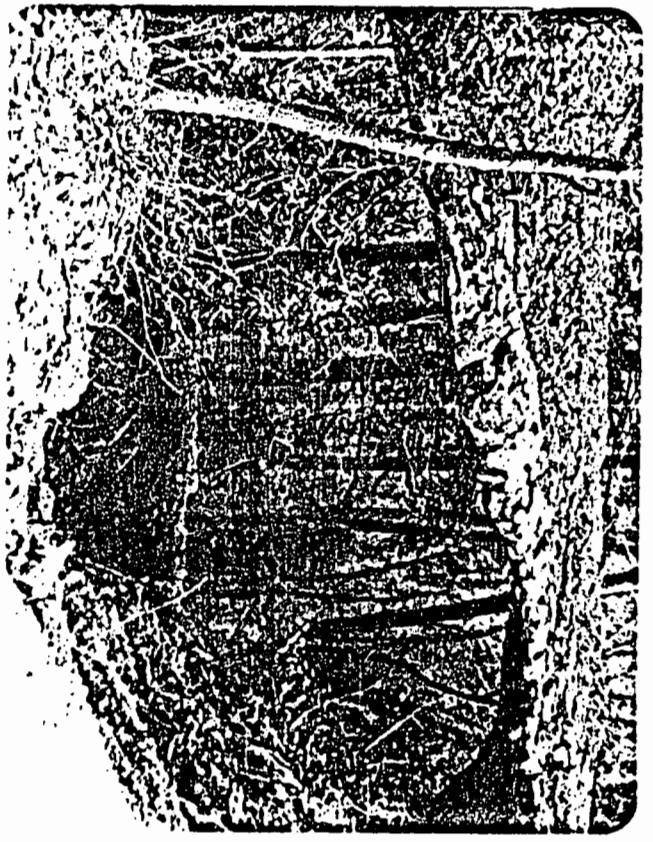
NO. 5

A natural arch along the road into the Blue Heron Mine.

NO. 6

The railroad track from Stearns, Kentucky, can be seen in the lower left corner of this photo. A spur crosses Paunch Creek on a plate girder bridge (in the center of the photo) and continues on to the Blue Heron Mine. The road extends across the top of the photo.



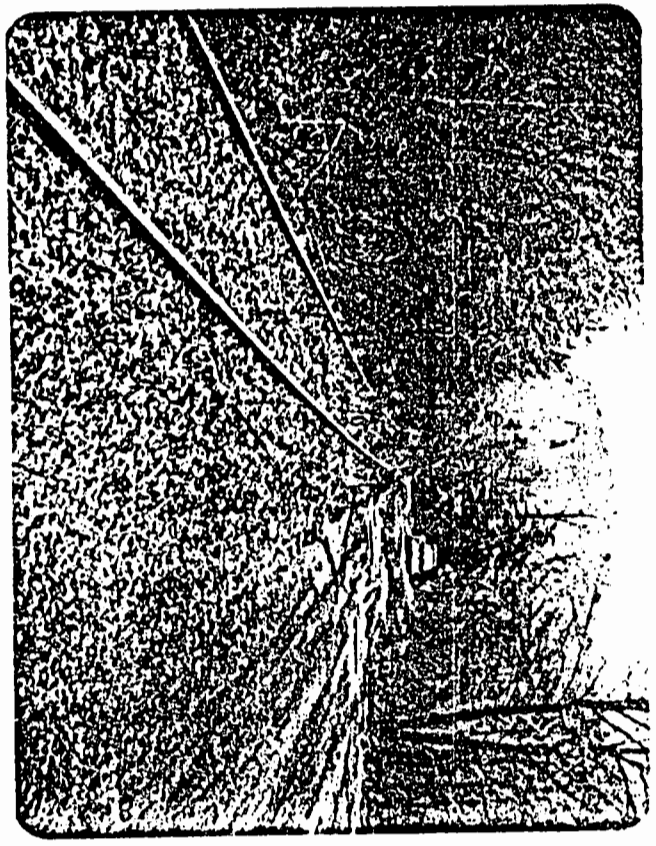


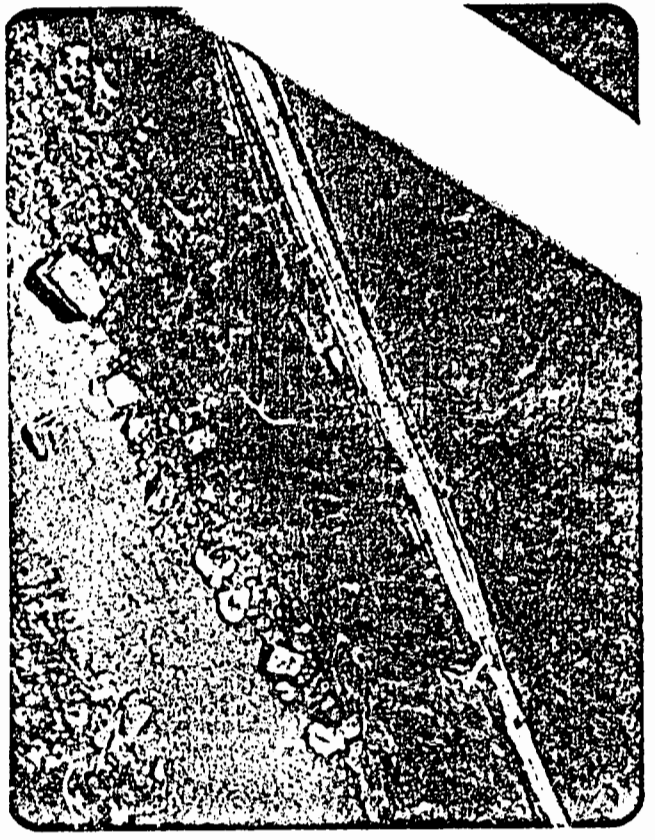
NO. 7

The railroad track and road into the Blue Heron as seen from the air.

NO. 8.

The same track and road.



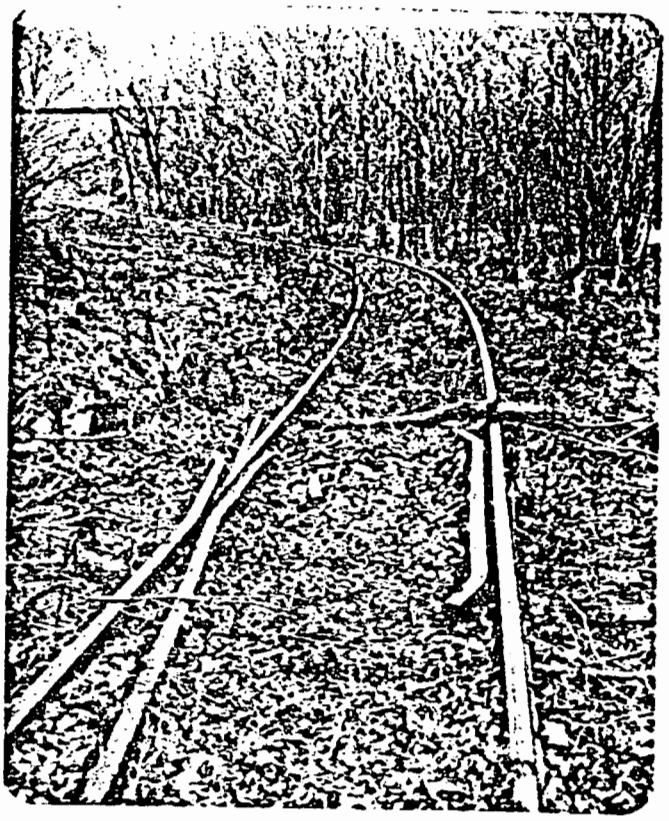


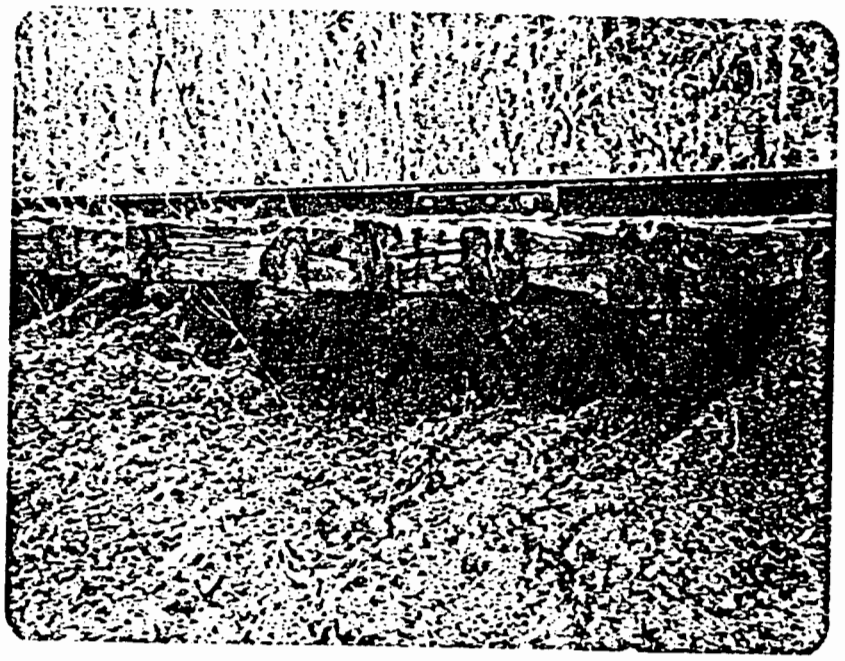
NO. 9

An old switch near the mine siding yard.

No. 10

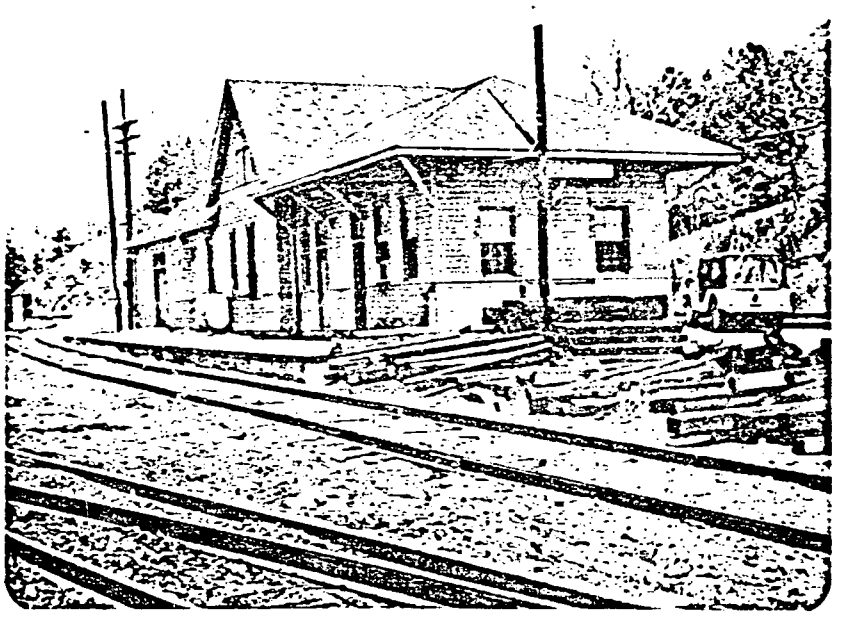
The roadbed had eroded in many places.





NO. 11

Passenger station, Stearns, Kentucky, no longer in use. This could be the starting point for transportation by rail of the visitors to the Blue Heron.



BUILDINGS AND STRUCTURES AT THE BLUE HERON SITE

The article prepared by Mr. Culbertson for the Lexington, Kentucky, Courier-Journal & Times has been copied and included in the appendix of this study.

Mr. Lemmie Wright, the first superintendent of the Blue Heron, and Mr. J. C. Slaven, the last superintendent, were interviewed. Both provided information in regard to the mine and structures. Neither had been to the site for a number of years, so some of their recollections were understandably vague. They both volunteered to visit the site to furnish exact locations and descriptions of buildings.

Allen and Garcia of Chicago, Illinois, were the designers and constructors of the tipple with its machinery and bridge across the Big South Fork. I discovered that they were still in business. During a telephone conversation with the firm's president, Paul Leven, they offered to give the NPS a complete set of working drawings (50 sheets). Mr. Leven also said that when the area opened they would donate the 50 original ink-on-linen drawings for an exhibit. The original drawings will be invaluable for stabilization or any degree of restoration we may want to do.

As can be seen in the two aerial photos, some of the mine structures were located on the fairly wide shelf some 15 to 20 feet above the river as well as up the slope of the hill. Other small structures extended along the tram road running south along the side of the hill some 30 to 40 feet above the shelf.

Tipple (Photos No. 12 thru 19):

This steel-framed, metal-sided building is structurally sound and fairly complete except for the sheet metal wall covering that most likely has been removed by persons unknown for the salvage value or to be reused in construction. Wood stair treads, decking, walkways, and railings have been removed or have rotted and fallen away. The exposed structural steel members have rusted but appear to be sound. The machinery seems to be fairly complete and seemingly in recoverable condition due perhaps to a residue of machine oil. The metal roof panels are badly rusted, distorted, and in many places blown off by the wind. The structure as it now stands is unsafe to enter because of the rotted and missing wood decking, rails, etc.

Recommended Action:

The tipple will be the prime exhibit of the restored mine complex. However, it is only recommended that the structural metal and miscellaneous work be wire brushed and painted with a rust inhibitor to stop further deterioration. Replace the exterior metal wall panels where necessary for visitor safety.

Alternates to the Recommended Action:

A. Fence the tipple area, preventing any visitor access to the buildings. Take no stabilization or preservation measures.

B. Fence the area around the tipple to prevent visitor access and take limited stabilization and preservation measures. That is, wire brush all structural and miscellaneous ironwork and paint with rust inhibitor.

C. Fully restore the tipple and provide any additional barricades necessary for visitor safety.

D. Fully restore the tipple and recondition all machinery and give scheduled operating demonstrations.

NO. 12

The general area of the Blue Heron Mine as seen from the air.

NO. 13

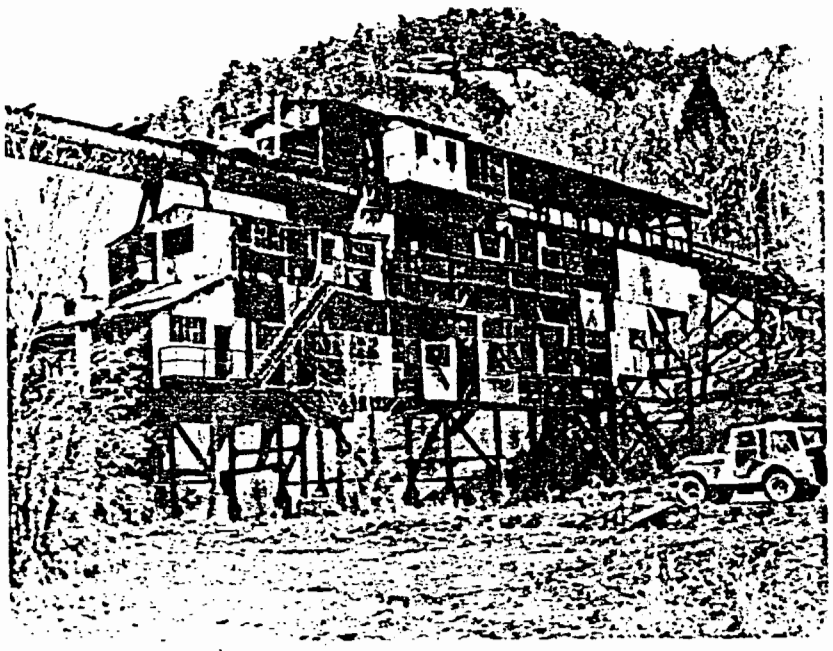
Tipple. Note indication of former track siding in left of photo.

NO. 14

South elevation of tipple. Metal siding has been removed for salvage value.

NO. 15

This view shows the elevated mine track to the shops and turnaround.

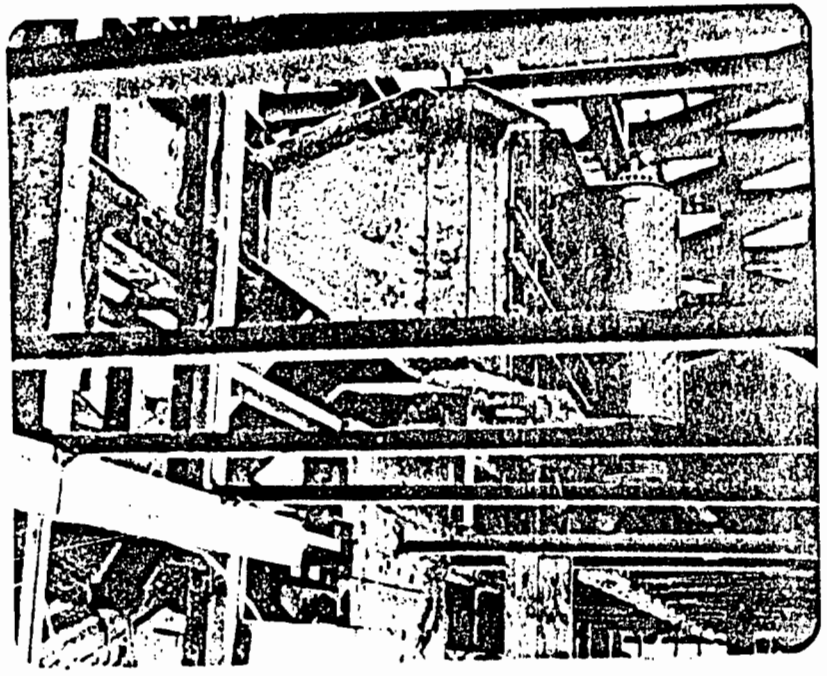


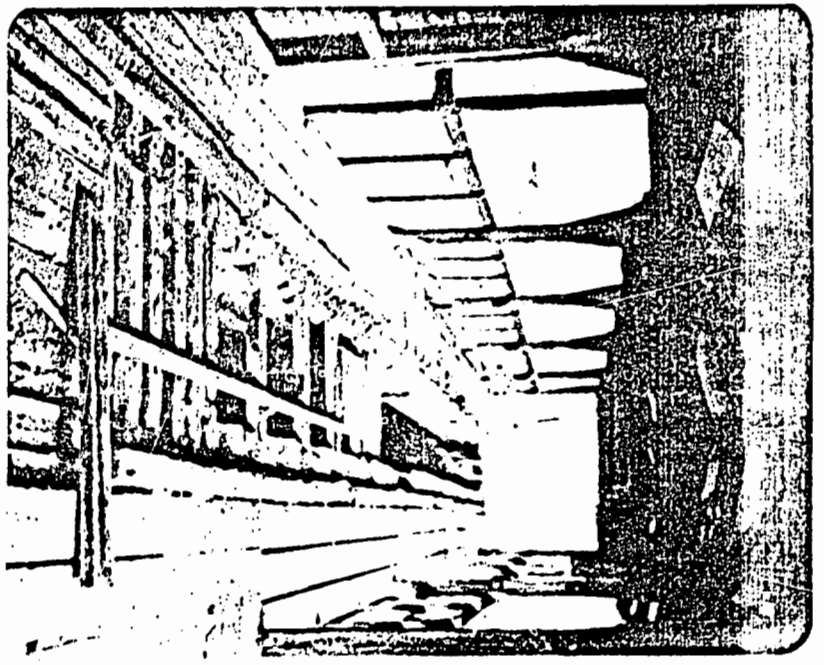
NO. 16

Here the mine cars dumped their loads of coal into the hoppers on their way to the "Shakers."

NO. 17

The grading and conveyer machinery has fared very well over the years.



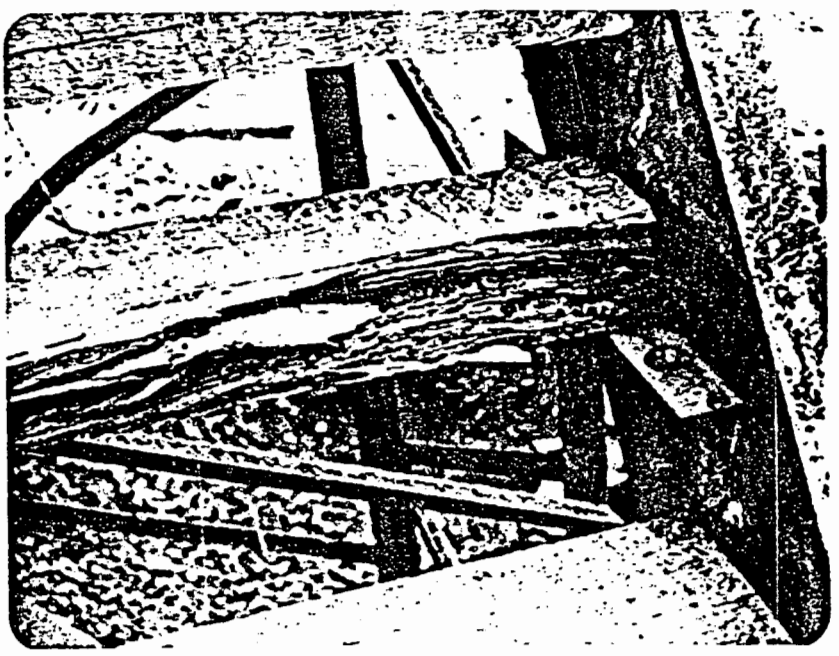


NO. 18

Gondola shute funneled the graded and washed coal into railroad cars. Note condition of the sheet metal parts.

NO. 19

Typical deterioration of wood construction.



Bridge (Photos No. 20 thru 23):

This is a steel girder structure, with the river space composed of two wing sections with a center hinge bearing on two single piers. The approach sections are single cantilevered wings terminating against the cliff on the west bank of the Big South Fork and on the east bank at the double girder span connecting the tipple. The steel structural members and bracing, although rusted, appear to be sound. All wood members and railroad ties remaining are rotted beyond use. The rails on which the mine train traveled are missing.

Recommended Action:

This feature equals the tipple in importance to the mine operation and therefore stabilization and limited restoration are recommended. Wire brush all metal work and paint with rust inhibitor. Replace wood construction necessary to the installation and install a catwalk with appropriate railings for hiker access to the west side of the Big South Fork.

Alternates to the Recommended Action:

A. Provide barricade around the tipple and do no stabilization or restoration.

B. Provide barricade around the tipple, wire brush and paint all metal work with rust inhibitor, but do not replace any wood construction.

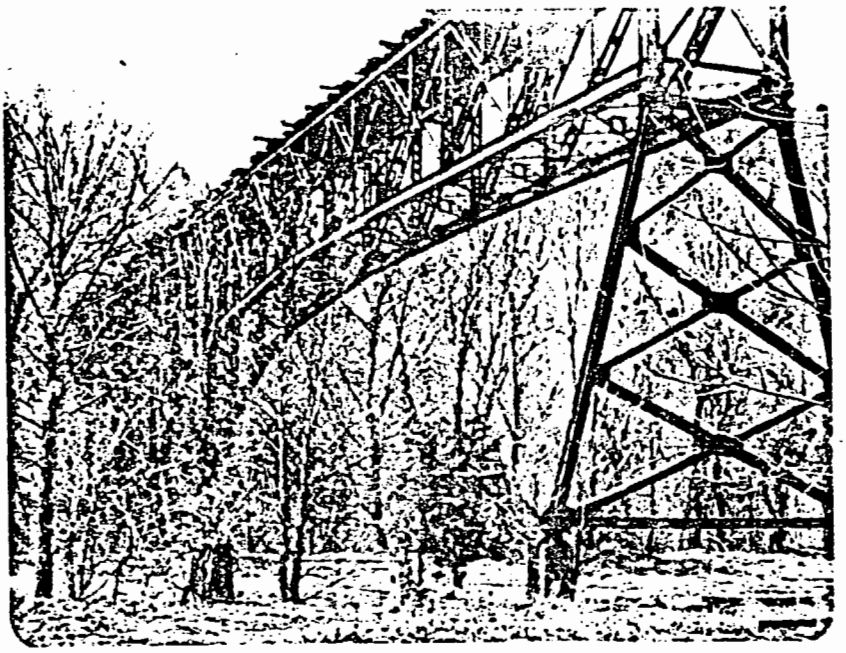
C. Wire brush all metal work and paint with rust inhibitor. Restore all wood construction and track. Provide catwalks with railings.

NO. 20

The mine railroad bridge across the Big South Fork.

NO. 21

Reinforced concrete bridge pier.

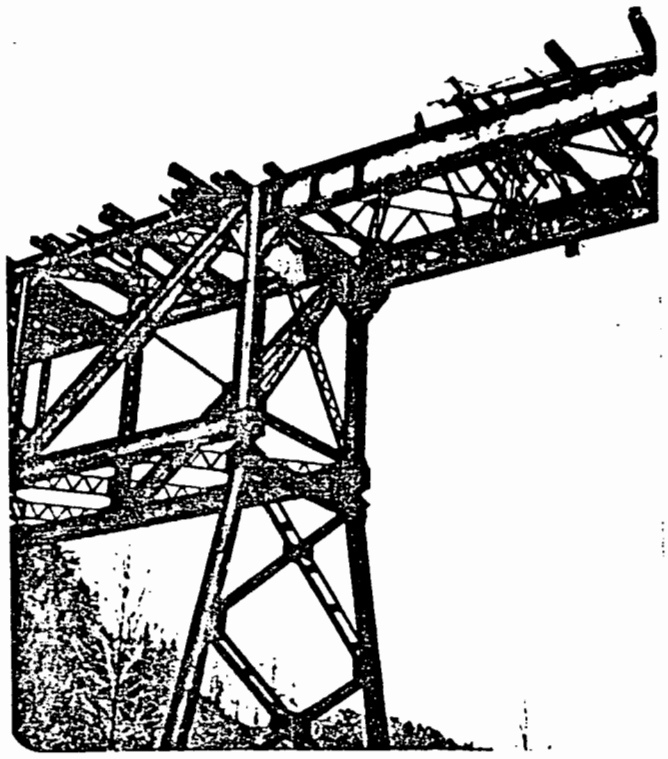


NO. 22

Bridge connection to tipple.

NO. 23

This photo shows the deteriorated condition of the wood construction of the bridge. The track has been removed.



Bathhouse (Photos No. 24 and 25):

This was a long, gable-roofed building oriented north-south. It had concrete floors and wainscot. The upper portion was frame. It consisted of four rooms, three of which contained showers, dressing rooms, and toilet facilities for the miners. The fourth room contained the battery recharging equipment for the miners' head lamps. A wood platform extended the full length of the west or river side. All that remain of this building are the concrete floor and stub walls and the debris of the wood platform, walls, and roof. The metal roof ventilator was found among the debris, battered but intact.

Recommended Action:

It is recommended that this building be reconstructed with interior alterations for functional use as administrative offices, maintenance, and/or public restrooms.

Alternates to the Recommended Action:

A. Clear the site of debris leaving the concrete remains and provide interpretive signs.

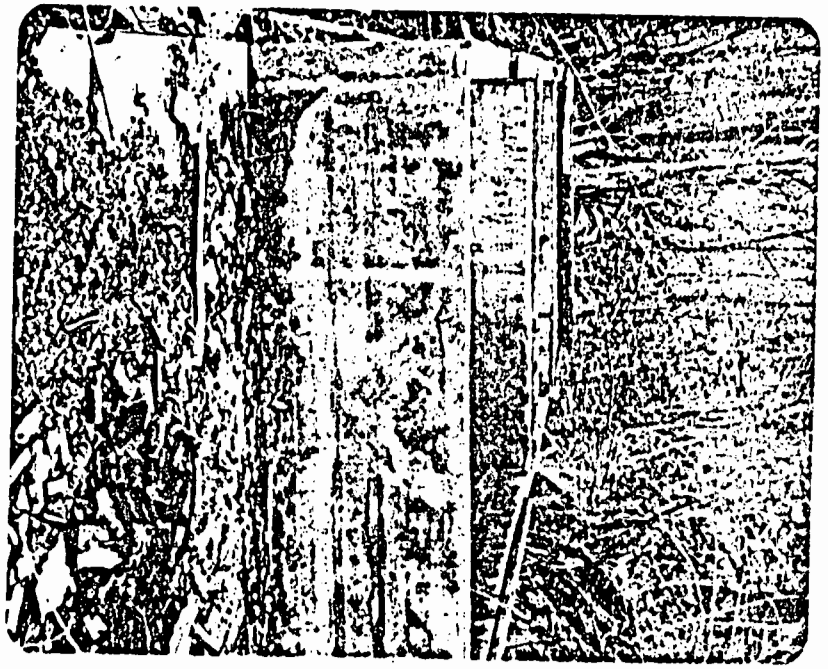
B. Completely reconstruct the building and furnish as shower, dressing rooms, toilets, and battery recharging room.

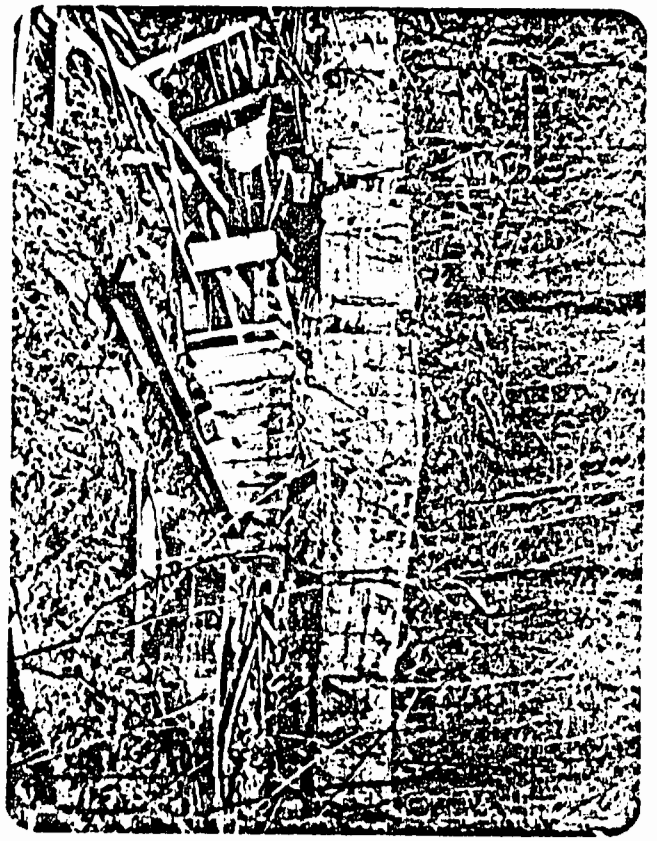
NO. 24

The concrete floor and stub wall are all that remain of the bathhouse.

NO. 25

This view of the south end of the bathhouse shows the battery charging room. Note small batteries scattered on floor.





Shops (Photos No. 26 and 27):

From the descriptions given by Slaven and Wright this was a semi-open, shed-type building covering sections of the track and oriented mainly in a north-south line. It was frame, partially or fully covered with metal siding, and probably had a metal roof. Steel concrete block wall sections were found.

Recommended Action:

This building is important in re-creating the historic mine scene. Reconstruction for adaptive use is difficult due to its configuration. It is recommended that it be reconstructed but modified greatly to be used as a maintenance structure or for equipment storage. Its location in relation to the tram road would make such use possible.

Alternates to the Recommended Action:

A. Clear site leaving concrete block and similar remains and provide interpretive marker.

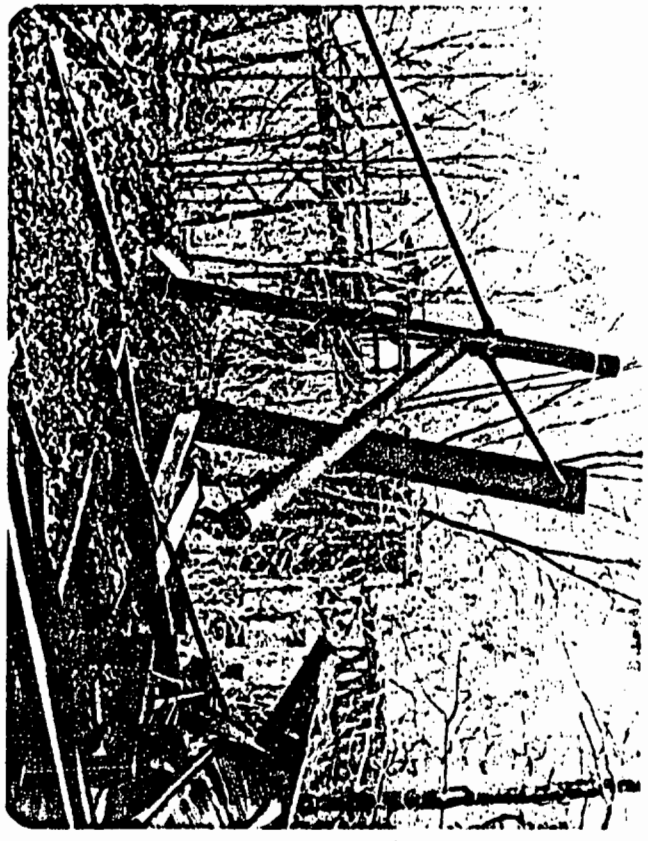
B. Completely reconstruct and furnish as exhibit. Reconstruct tracks.

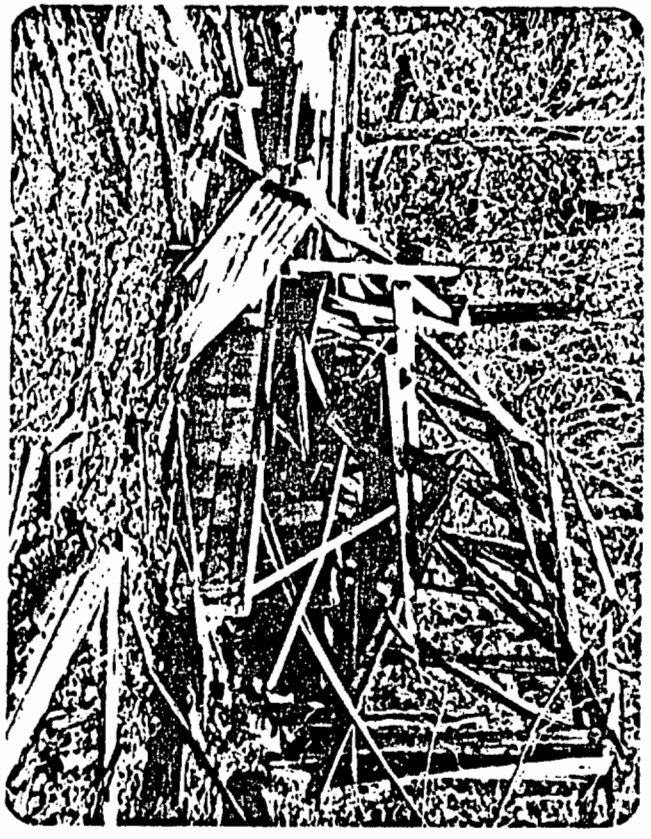
NO. 26

Remains of mine railroad shop. Note metal siding and concrete block stub wall.

NO. 27

This is believed to be a part of shop equipment.





Sandhouse (Photo No. 28):

This structure also occupied a very prominent position. While it performed a very important function, providing dry sand for the donkey engines to improve traction, it will not be very interesting to the visitor.

It is for the most part a concrete structure with a steel and perhaps wood cover above.

Recommended Action:

Since few visitors will understand or be interested in this structure, it is recommended that debris be cleared and an interpretive sign be provided. The steel members would of course be wire brushed and painted with rust inhibitor to preserve the metal.

Alternates to the Recommended Action:

A. Clear site of debris, do not provide any preservation treatment.

B. Full restoration of the sandhouse complete with tracks.

NO. 28

Concrete sand hoppers and some steel structural members are all that remain of the sandhouse.

Commissary:

No evidence of this structure exists today. According to the description by J. C. Slaven it was a long, one-story building located between the tracks and the river some 300 yards north of the tipple. The entrance to the commissary was near the north end. On entering the commissary, the mine pay office was on the right and the remainder of the building was outfitted as a store with counters and shelves.

It was not learned if this building was destroyed by floods or vandals.

Recommended Action:

This building would lend itself to reconstruction as a visitor contact station with mine, wildlife, and geological exhibits. The pay office could serve as a ranger office. Include visitor restrooms.

Note: It should first be determined if the location is in the floodplain. If so, it could be raised on piers if the level of the floodwaters is not too high. In the event that is unpractical, it could be relocated.

Alternates to the Recommended Action:

A. Mark site with sign.

B. Reconstruct on new site for use as visitor contact station with exhibits and restrooms.

C. Reconstruct on original or new site as concessionaire store with public restrooms.

Quarters (Photos No. 29 and 30):

Estimates by the two former superintendents as to the number of quarters at the Blue Heron site vary from 14 to 22. Both men, however, felt they could locate the houses.

It has been determined that the superintendent's quarters and two others were located east of the tracks and up the slope about 500 feet north of the tipple. The remains of the superintendent's quarters were found and identified because of the basement. The two adjacent house sites were not located.

Smaller quarters were originally located between the tracks and the river north from the commissary to near the confluence of Paunch Creek and the Big South Fork. Three other quarters were located eastward from that point, two on the north side of the access road and one on the south side slightly up the slope.

From the descriptions, the superintendent's quarters were a very nice six-room and one-bath house. The two adjacent quarters were likely equal in size. All quarters were furnished with water and plumbing. The superintendent's quarters had central heating, with the furnace located in a small basement.

Recommended Action:

Because it is not likely that more than three houses will be required for NPS personnel, it is recommended that the superintendent's quarters and

the two adjacent be reconstructed. The exterior would duplicate the original appearance, the interiors be adapted for modern living. Concentrating the quarters at one location would simplify the water and sewage systems.

It is recommended that none of the quarters located between the tracks and the river be reconstructed, because these are in the floodplain.

Alternates to the Recommended Action:

A. Construct modern quarters instead of duplicating the exterior appearance of the original structures.

B. Reconstruct superintendent's quarters on the original site. Construct two modern quarters on the access road sites.

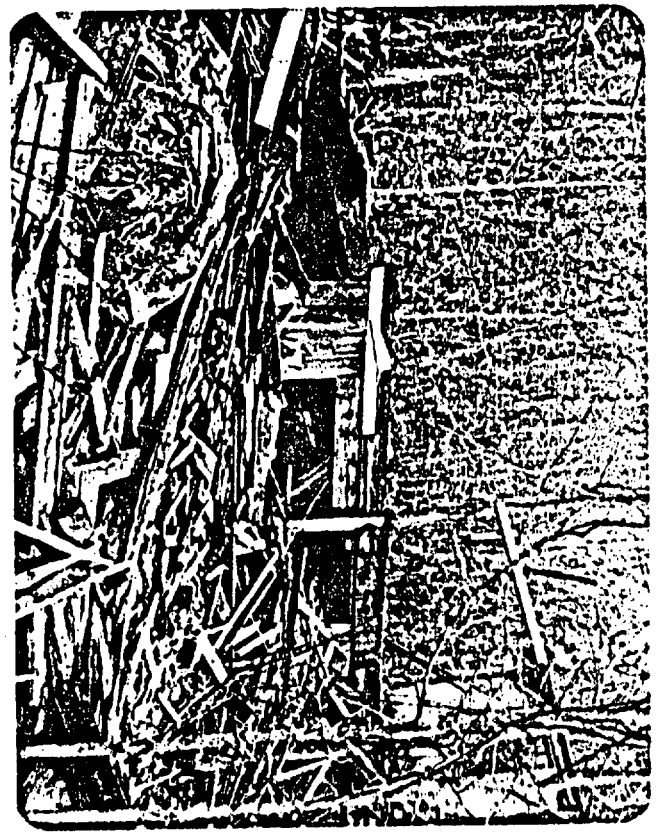
C. Construct all three quarters on the access road sites.

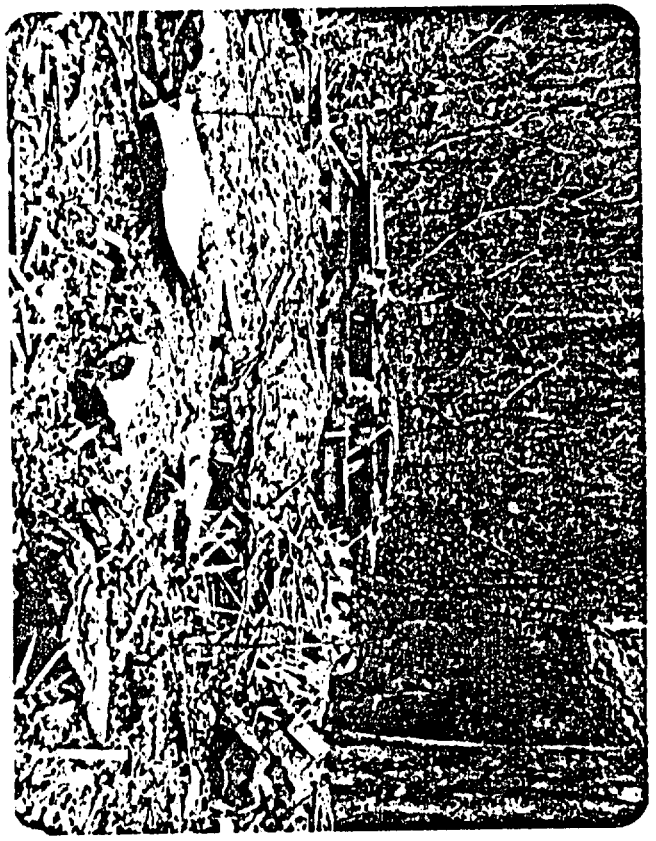
NO. 29

Site of mine superintendent's house. Note small basement in which furnace was located.

NO. 30

Remains of quarters located between railroad track and river, north of the commissary.





Church (Photo No. 31):

This building was located in the floodplain just south of the tipple. It was a fairly large frame structure with concrete floor and basement. All that remain of the church are the broken slab and the basement, the superstructure having been completely destroyed by floods. No adequate description was given by either superintendent interviewed.

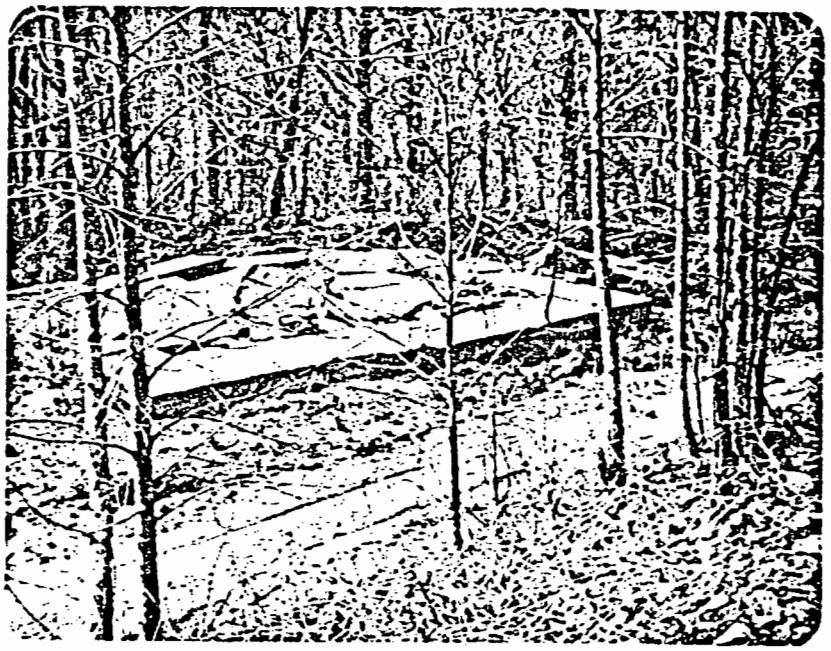
Recommended Action:

Although the church may have played an important part in the life of the miners, because it was located in the floodplain it is recommended that it not be reconstructed. An interpretive marker at the site of the ruins would explain the remains.

No alternate action is proposed for this building.

NO. 31

Floods have destroyed the church, leaving only the concrete floor slab and the basement.



Miscellaneous Small Buildings (Photos No. 32 and 33):

An undetermined number of small wood and metal buildings dotted the main developed area and the tram road. Some of these are identifiable and others are not.

Recommended Action:

As need may develop, particular structures that fit the function and location will be reconstructed with interior modification as required for their use.

Alternates to the Recommended Action:

A. Clear sites of debris and install interpretive marker.

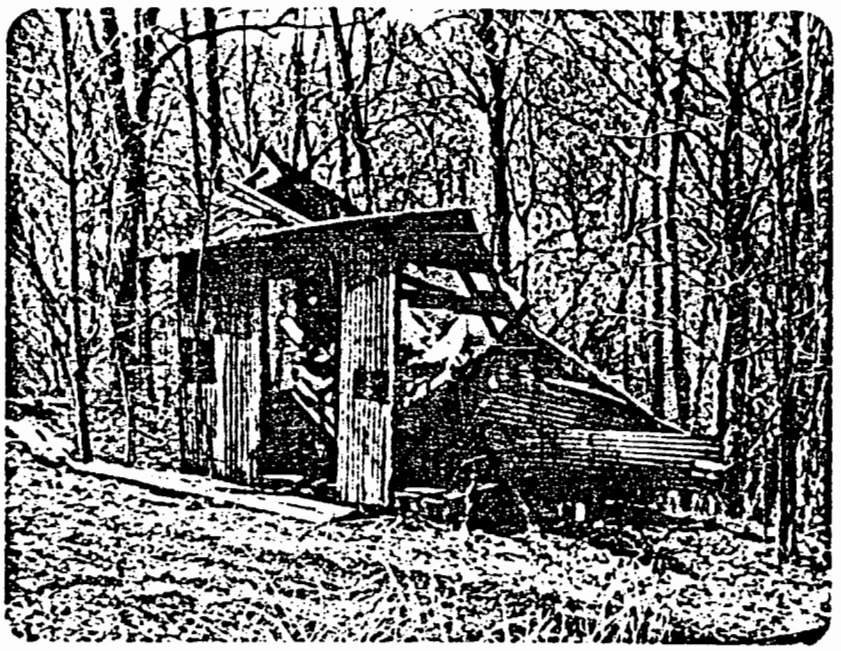
B. Construct modern service buildings on the old building site as the need develops.

NO. 32

This corrugated metal building is located on the tram road.

NO. 33

Remains of another small building along the tram road.



Mine Trackage (Photo No. 34):

The mine tracks extending eastward from the tipple through the shops to the sandhouse and turnaround would contribute greatly to the visitor's understanding of the mine operation in the area. The cost of even a partial restoration of this feature is questionable.

Recommended Action:

Clear the debris, leaving any existing remains in place. Apply preservative treatment such as penta to the wood portions. Wire brush all metal work and paint with rust inhibitor.

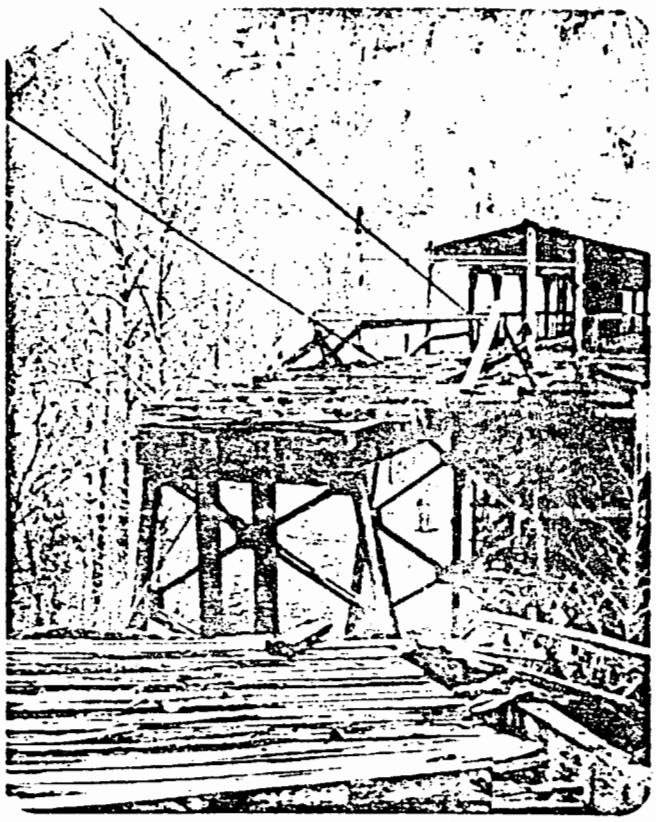
Alternates to the Recommended Action:

A. Preserve existing remains and restore certain sections that would help the visitor interpret the action that took place.

B. Complete restoration of the mine trackage at the tipple, shops, sandhouse, and turnaround.

NO. 34

The track extends eastward from the tipple to the shops, sandhouse, and turnaround. They also connect with the tram road.



Tram Road (Photos No. 35 thru 37):

The roadbed is all that remains of the mine track extending to the mine entrance located just north and up the hill from the tipple and then southward to service the mines in that direction. It was originally the track over which the coal was transported to the tipple. The power units operating in the mines and over the outside of the track were electric. They received their power from an overhead trolley, evidence of which is still visible in places along the tram road.

Recommended Action:

Clear of debris and preserve railroad ties. All track rails are missing. Stabilize remains of overhead trolley. Install interpretive sign explaining the historic function.

Alternates to the Recommended Action:

A. Clear away debris. Do not apply any preservative treatment. Install interpretive sign.

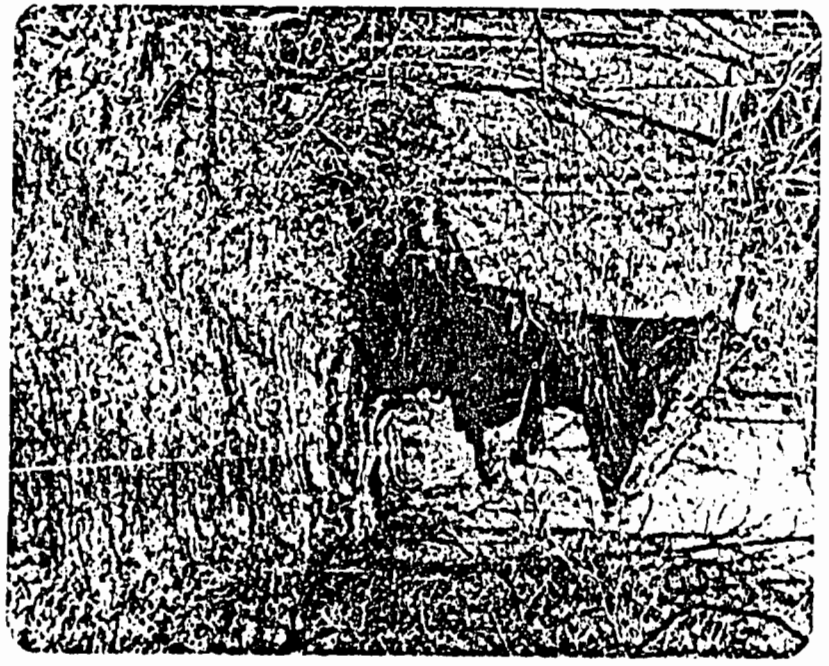
B. Clear away debris. Provide preservative treatment. Restore portions necessary to the visitors' understanding of the operation. Install interpretive signs.

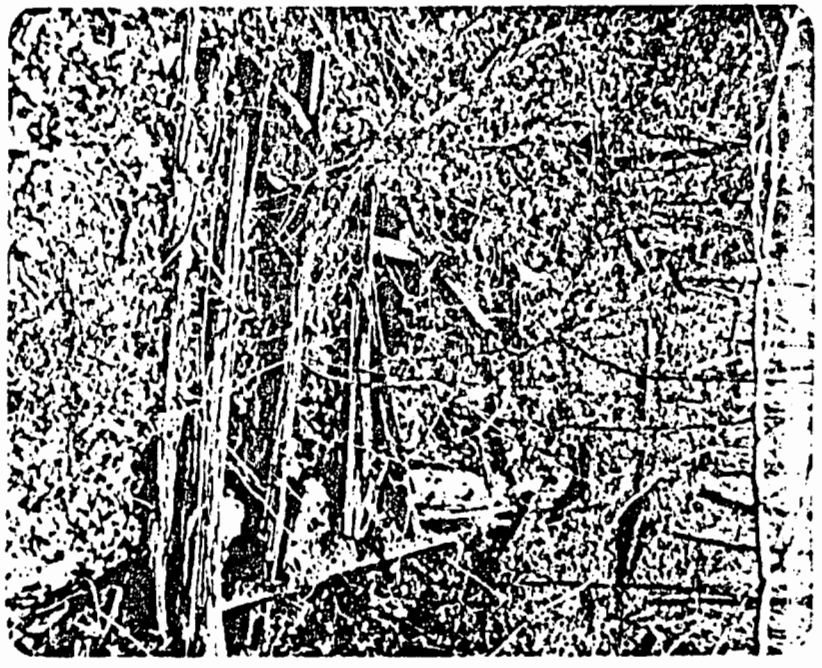
NO. 35

Remains of mine track along tram road. This extends southward to the mines on the east side of the Big South Fork and the slate dump.

NO. 36

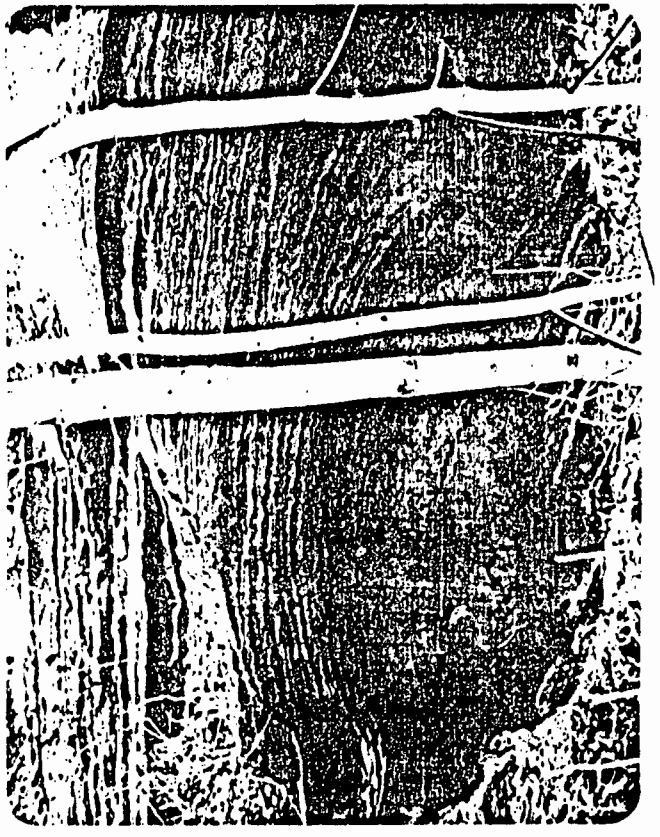
A narrow spot on the tram road.





NO. 37

There are interesting rock formations along the tram road.



Mines (Photos Nos. 38 and 39):

The old mine openings have never been closed and will be a source of danger to the visitor. There is one such opening just north and above the tipple, several south along the tram road. An unknown number are located on the west bank of the Big South Fork.

Recommended Action:

Clear debris from the openings and install steel bar barricades to prevent the public from entering. Entrance into these mines is very dangerous. Rockfalls can and do occur at any time without warning.

Alternate to the Recommended Action:

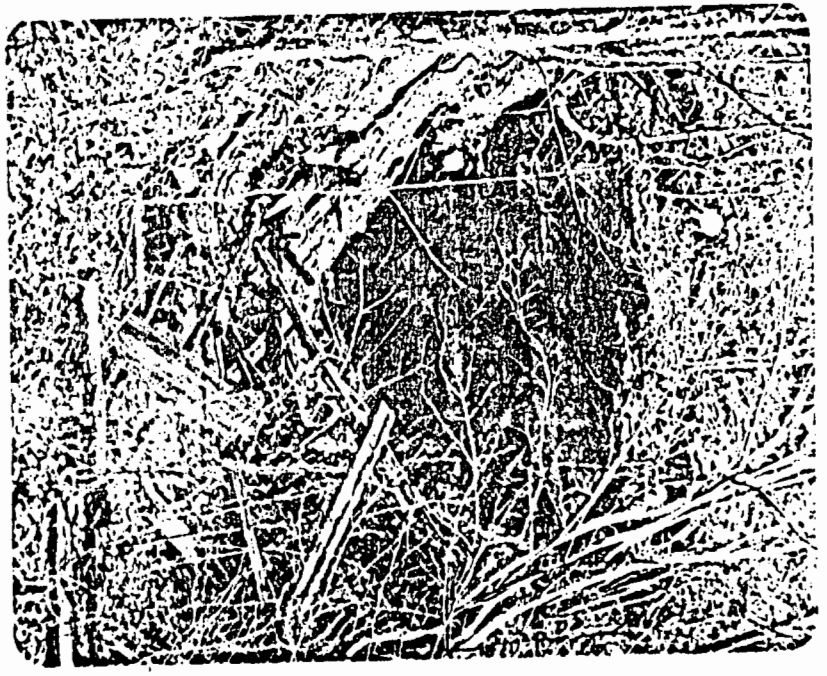
A. Clear mine nearest tipple, install shoring, and permit visitors to enter with guide. Clear all other mine openings and install barricades.

NO. 38

Entrance to the mine closest to the tipple. It is reported to be the first dug at the Blue Heron.

NO. 39

Partly closed mouth of a mine located on the tram road.



Slate Dump (Photos No. 40 and 41):

This feature is located on the river side of the tram road just downstream from Devil's Jump. Here the slate, removed from the coal at the tipple, was dumped over the cliff. A few wood members of the tipple are all that remain besides the enormous pile of slate.

Recommended Action:

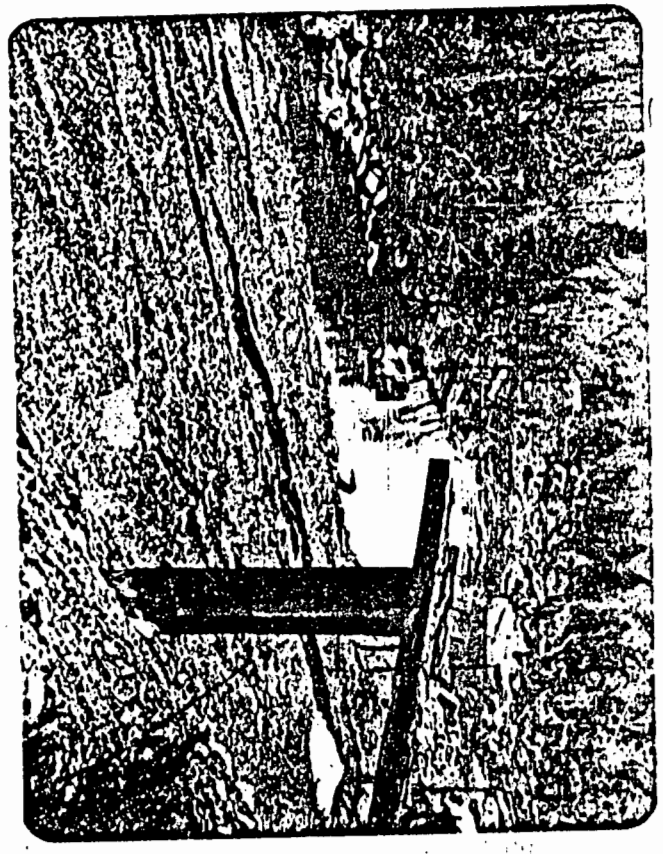
This feature is to remain as it now stands with no action being required.

NO. 40

Slate was removed from the coal during grading and disposed of here on the tram road.

NO. 41

Very little is left of the tipple at the slate dump.



SUGGESTED PRIORITIES FOR ACTION

PRIORITY NO. 1

A. On-site Security: To stop destruction and removal of historic materials and artifacts. To control and direct public use.

B. Safety Measures: Open mines with falling rock, standing structures with deteriorated wood construction, and building sites covered with debris present a serious hazard to the visitor, which must be eliminated.

Erect barricades at mine entrances to prevent entrance but not restrict visual access. Repair and restore wood stairs, walkways, and decks, and construct guardrails throughout the tipple and bridge. Remove debris from building sites to improve appearance and eliminate chance of snakebite and puncture wounds.

C. Preservation of Historic Remains: Remove rust from all metal work and apply rust inhibitor. Restore roofs and wall covering to protect machinery. Much of this will be accomplished under "Safety Measures."

D. Access: Upgrade entrance road to provide safe, all-weather access to the mine site.

PRIORITY NO. 2

A. Operational Structures: Provide necessary service buildings, equipment storage facilities, etc., as required for the operation of the area.

B. Visitor Facilities: Develop visitor contact structures, comfort stations, and picnic sites.

BASIC DATA

Senate Bill S. 3349, 92d Congress, 2d Session: To authorize the establishment of the Big South Fork National River and Recreation Area in the States of Kentucky and Tennessee and for other purposes.

House Report 10203-32: An act authorizing the construction, repair, and preservation of certain public works on rivers and harbors for flood control and other purposes. Passed by the 93d Congress, January 21, 1974.

Memorandum: Dated April 8 to Manager, Denver Service Center; Attention: Historic Preservation Team; From Acting Regional Director, Southeast Region; Subject: Investigation of Blue Heron Mine Community, Big South Fork.

U.S. Department of Agriculture, Forest Service Map -- Daniel Boone National Forest, Kentucky.

Kentucky Department of Transportation; Bureau of Highways; Division of Planning; General Highway Map for McCreary County, Kentucky.

The Courier-Journal & Times Magazine; Sunday, January 9, 1972; Louisville, Kentucky.

INTERVIEWS:

Dr. Frank Thomas -- President, Stearns Coal and Lumber Company, Stearns, Kentucky

C. W. Hume -- Editor, The McCreary County Record, retired.

Joe Perry -- McCreary County Sheriff

Buck Bradley -- Town Marshall, Stearns, Kentucky

Mrs. E. W. Melton -- Kentucky State Historic Preservation Office (telephone contact)

William T. Boyd -- Bureau of Mines, U.S. Department of the Interior (telephone contact)

James D. Slaughter, Cumberland Studio, Somerset, Kentucky

Ben Culbertson -- Photographer (telephone contact)

J. C. Slaven -- Last superintendent, Blue Heron Mine, retired. (Transcript of interview included in Appendix.)

Lemmie Wright -- First superintendent, Blue Heron Mine, retired. (Transcript of interview included in Appendix.)

APPENDIXES

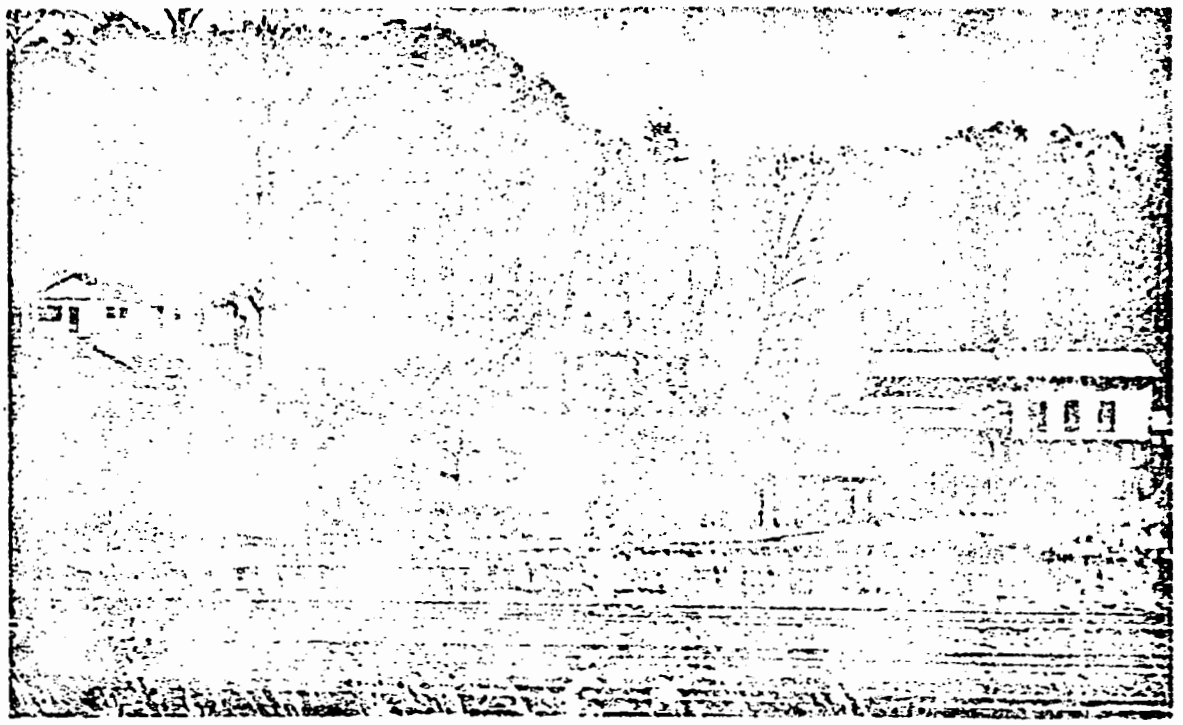
Appendix A

1972 Photographs

Note:

It is regrettable that prints of the photographs by Ben Culbertson of the Blue Heron Mine buildings before they were destroyed have not been received as promised.

We will continue in our efforts to obtain these photographs and when successful will forward prints to the Region.



The people are gone and only the relics of their homes and working installations remain in Blue Heron, above, a deserted mining town near Stearns, Ky.

[Appendix B]

A mining town that was and is no more

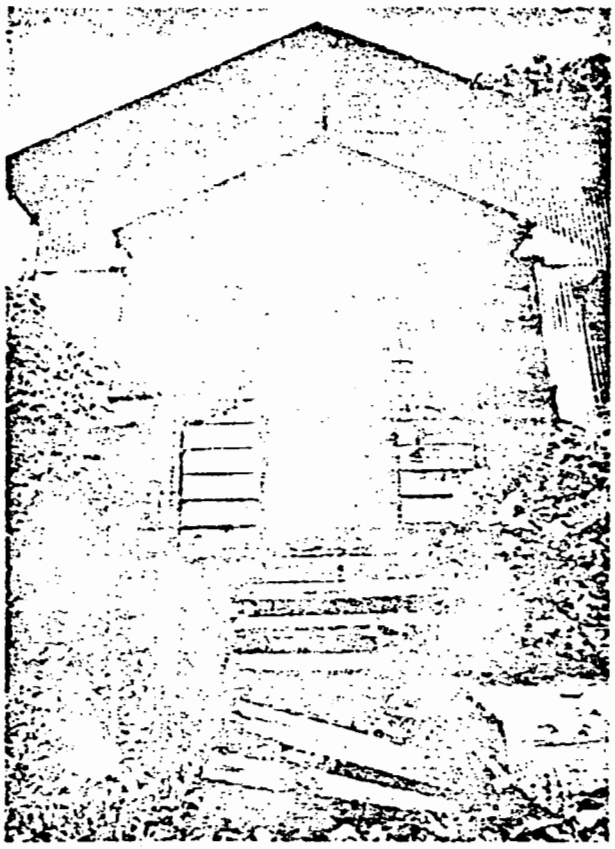
The Ghost of Blue Heron

Photographed by BEN CULBERTSON

OUT WEST the ghost towns are famous. Some qualify as tourist attractions. The glamour of the gold rushes that gave them life lingered on after they died. Coal is not as glamorous as gold, but it too can create towns that live, and produce, and die. Blue Heron was the name of one such coal-mining town. It lies dead now in Southeastern Kentucky's McCreary County, its pulse stilled, the heat of life that the coal kindled long cooled to ashes and dust—a weedy, vandalized grave of an era. Some say it was called Blue Heron because of the raucous, long-necked, long-legged birds the miners saw when they first came to the Big South Fork of the Cumberland to dig the riversides for coal. The birds are native to the Big South Fork valley, but the town's name may have been romanticized with the retelling of stories in the passing of time. The Stearns Coal and Lumber Co., which operated the mine, used names of birds for grading their brands of coal. "Golden Eagle" and "Scarlet Tanager" were two such designations. And the company's name for coal from "Mine 18" near the rapids of Devils Jumps was "Blue Heron." The mine went into operation about 1937; soon the dwellings which were to form the community of Blue Heron were built and many of the miners and their families came to live here within sight and sound of their livelihood. Beside the roads and the tram tracks were the small, one-story frame houses of the workingmen, and legend has it that like every mining town, Blue Heron had its "silk-stocking row," the side of the tracks where the mine's superintendent lived in a more spacious, if not more grandiose, abode. Blue Heron had a church and a school and a local retailer—the ubiquitous

Continued

BEN CULBERTSON is a member of the science faculty at Paducah Community College at Paducah, Ky., and is a part-time correspondent for The Courier-Journal.

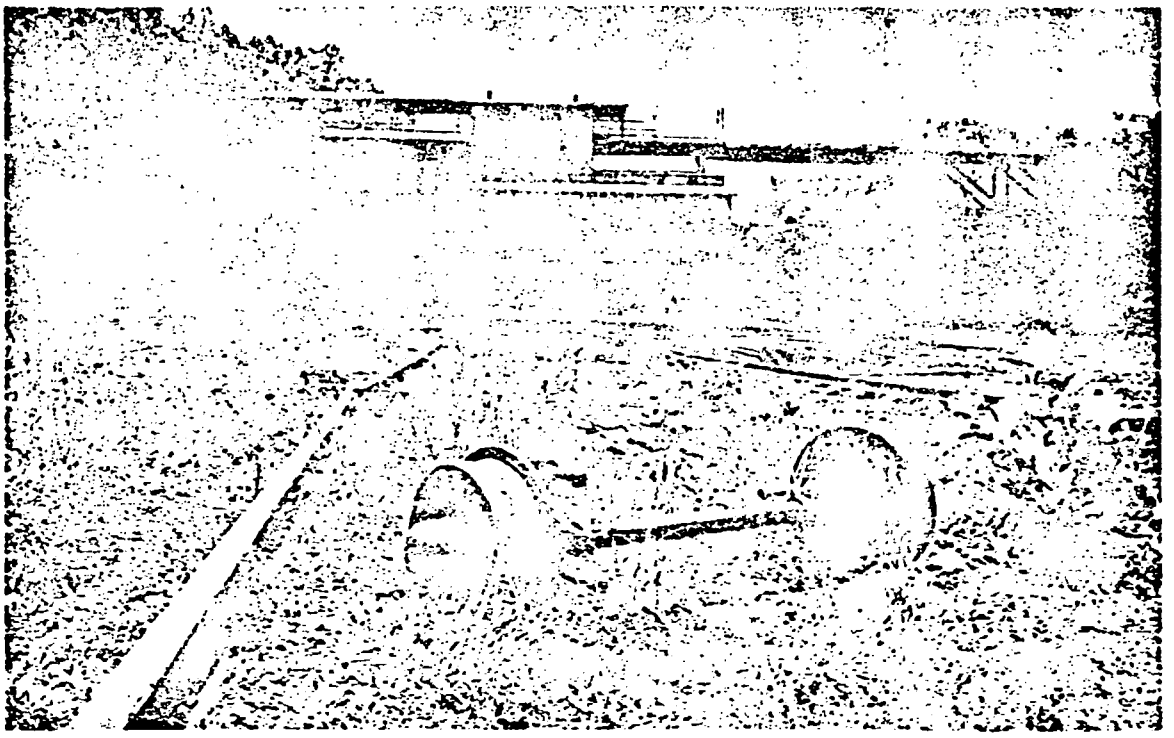


The only sign of life now at the shower house, left, where miners cleaned up after work, is a worn pair of shoes, sorely pulled in the doorway. A miner and his family once lived in a house with decorative trim, above. Home was close to work; below, a workman's cottage and the mine's still-sturdy-looking tipple seen in the mists of early morning.

The Ghost of Blue Heron *Continued*

company store. In its heyday, during the World War II years, about 300 men were employed at Mine 18. Coal was dug for about four miles on both sides of the river, both upstream and down. But as the distance to the coal seams increased, the practicability of maintaining the Blue Heron community decreased. The clang of the time clock as the last shift punched out in 1962 was Blue Heron's death knell. Yet memories remain of how it was to live and work at Blue Heron when the community was throbbing with life. You can ask an old retired miner who lived and worked there. He fishes the Big South Fork now, occasionally squints at the ghost of Blue Heron and remembers: "Why buddy, we never did nothin' but work. All the time. They was shore some good men here, too. I reckon a better bunch of fellers never worked a coal seam ... I lived right down the road there. Some of the houses is gone now, and what you see here ain't nothin' to what's gone before. Some folks think the place's hainted. The old place just makes noises while it's dyin' and people think a booger's around ... A lot of the fellers who worked here had been in the mines a long time when they started workin' here. We had a church. It was right over there where them concrete steps is. The company store stood right there, but it went down a long time ago. I bought many a loaf of bread and pound of baloney right over top of that patch of weeds. Buddy, I tell you that times sure change in a hurry. You just don't know how fast you're leavin' the world till you got enough years behind you that they start runnin' together. Right over the big bluff up there above the Jumps [Devils] was a still that kept some fellers around here happy. Good 'shine I'm told, but I never done much drinkin'. One feller got drunk and fell off a rock into the river ... done some awful hollerin'. His friends snaked him out of the water right well waterlogged, but not enough to keep him from havin' another drink. You know what? That very same feller ended up bein' a preacher and havin' enough religion for the whole county. The Lord works in strange ways don't he, buddy? Yeah, some fellers got hurt here sometimes but when they was able to they always come back to the mine. Something about minin' that gets in a man's blood. Coal done a lot for us here, but we shore done a lot more for it."

CAN THE OLD MINER'S memories of a town where he lived and worked become a reality that posterity could enjoy? Could Blue Heron be restored much like the gold-rush towns of the old West? It seems unlikely at the moment, but proposals are being made that Congress act to create a National Recreation Area on the Big South Fork of the Cumberland River in the Devils Jumps area. The area is highly regarded by conservationists, who hope that this stretch of the river will be kept wild. But also pending is a long-standing Army Corps of Engineers proposal to build a hydroelectric dam near Devils Jumps, flooding the river. Conservationists and others have opposed the dam, and currently the Corps is restudying the project's economic justification at Congress's request. But for now, at least, the ghost of Blue Heron is a gaunt specter of a time when coal was dug and loaded by energy generated by men. Picks and shovels preceded the big machine and diesel engine. The miners founded a heritage of coal in Kentucky, and shaped the character of that heritage. Blue Heron was one of the places they did it. □



Blue Heron's tipple and the rail bridge across the river still remain, above, though the bridge's ties have been damaged by fire, apparently set by vandals. The wheels and axle are from one of the old coal trams. Beneath the crumbling wood chute, below, is a slag dump, where the "dog-pickers" disposed of impurities in the coal. Coal was brought in trams cars to the old scale in the tipple, left, where a miner's work was weighed.

Appendix C

Interviews: Mr. J. C. Slaven and Mr. Lemmie Wright

The following interviews with Mr. J. C. Slaven and Mr. Lemmie Wright fail to provide as satisfactory descriptions of the buildings as I had hoped for. I do believe that if these two men were taken to the mine site, their memories would be refreshed and much helpful information and many descriptions could be obtained from them. Neither man had been to the mine in the past several years.

MR. J. C. SLAVEN INTERVIEW

APRIL 17, 1975

REVELO, KENTUCKY

JONES: What is your name please?

SLAVEN: J. C. Slaven.

JONES: I understand that you worked at the old Blue Heron Mine.

SLAVEN: That's right.

JONES: When were you employed there?

SLAVEN: April 8, 1954.

JONES: And did you stay until the mine closed down?

SLAVEN: Well, practically. We were working at one little opening across over the river over there, that is on the west side of the river.

JONES: What year was that?

SLAVEN: 1962.

JONES: What was your position for the Blue Heron Mine?

SLAVEN: I was superintendent of the mine.

JONES: Could you give me a general description of what was at the Blue Heron Mine?

SLAVEN: Well, we had a mine up at Blair's Creek. We robbed it all out. And we had one where we come to the long tunnel we called the Long Tunnel up at Lar Branch and we robbed it out.

JONES: These were on the west side?

SLAVEN: That was up the river, going up the big South Fork. I would say that was 3 miles from the tipple up to these mines.

JONES: Is that the same side of the river as the tipple?

SLAVEN: That's right. On the same side. And then we come down to what we call Barthell. We had an opening we went in Barthell and we went in and robbed all of that of what we could rob and brought it all down. And there was one opening, we called it One North. That mine was never robbed. It is still standing there like it was drove up.

JONES: What was the name of the shaft close to the tipple, just slightly north, almost behind the bathhouse?

SLAVEN: That was the backup. They laid an opening in that hill there and went in there piecing it. The coal played out and that's where the motors would come down the river and they pulled back in there with a trip and back it up on the tipple.

JONES: Oh, I see that was just turnaround.

SLAVEN: That's right. Just a back-up in there. That's squeezed out in there. That was number one coal that was squeezed out. Now, these other openings went up the river from that went on up the river went into the number two coal. This number one, North we called it is up there. It's never been robbed and that mine could be gone back into.

JONES: There was an office there at the mine, wasn't there?

SLAVEN: At the tipple, yes.

JONES: That was right on the tipple?

SLAVEN: Right on the tipple.

JONES: I understand there was a bathhouse very close to the tipple.

SLAVEN: That's right. There was a big bathhouse right down below the old shop, where this opening comes out on the side there where the motors pull back in the shop was right there and the bathhouse was right below the shop.

JONES: Could you remember how that bathhouse was arranged?

SLAVEN: Well, going in the front of the bathhouse was what we called the lighthouse where we kept our battery lights where we charged them and men got their lights. And you went on to thru the lighthouse and into the bathhouse. That's where the men hanged their work clothes up there and take a bath and put on their other clothes to go home with.

JONES: I was out there yesterday and I found a whole bunch of little batteries and I assumed that had something to do with the lights.

SLAVEN: That's right. That's where the lighthouse was.

JONES: Did the mine machinery operate by electricity?

SLAVEN: That's right.

JONES: Did you manufacture, that is, generate the power there or was it brought in?

SLAVEN: It come in from Stearns. The company used to make their own power in Stearns and finally got their power from Kentucky Utilities. And they quit generating their own power, but they used to make their own power themselves.

JONES: When the mine was in operation, how many tons of coal could you move out in a day?

SLAVEN: Well, I'd say when we had all the units working. We had four units worked two shifts. We usually run around from 8 to a 1,000 tons a day. This is full operations.

JONES: Can you describe this shop for me that you spoke of that is right behind the bathhouse?

SLAVEN: The shop, the track come right across it. This track that goes across the bridge up there. This track come right on out and you can come out and pull right into the shop. The shop is built right on this structure that the tipple is on.

JONES: Like a trestle.

SLAVEN: That's right. You come out and right on in the shop. Right off the track and right on the bridge.

JONES: Remember the sandhouse? Well, what was that for?

SLAVEN: That's where we dried the sand for the locomotives to pull the coal with.

JONES: Just in front of that there is a concrete pit. Looks like a grease pit in a modern service station. Was that for working on any of the railroad equipment?

SLAVEN: No. What your're talking about is part of the sandhouse and right below the tracks we had what we called a car shop where we repaired the mine cars.

JONES: As you come down towards the river from the tipple, can you remember just where the store or commissary was located?

SLAVEN: I'd say just below this tipple, not over 300 yards from the tipple to where the store sat on the left. There was a road where cars went up and down and the store sat there as the first building from the tipple. The store sat there and there was a dwelling house just close to the store. And on down ways there is another dwelling and that's all the dwelling houses until you get down to a 1,000 feet or more then there some more dwelling houses on the left of the road and some on the right of the road.

JONES: This store, that sat between the railroad tracks and the river . . .

SLAVEN: That's right.

JONES: Can you recall how that store was arranged? Whether it was a one-story building or two-story building?

SLAVEN: It was a one-story building and an office where they kept all their time. It was all combined in the store together. You go in there, the company would issue scripts--the men would draw and get their scripts. On payday the men would get their money, their vouchers. All was combined in the store. It was a one-story building.

JONES: One-story building and it ran parallel to the railroad.

SLAVEN: That's right.

JONES: Was the office on the end, nearest the tipple?

SLAVEN: No. It was on the far end. You go in the door and just as you go in the door the office is on the right of the door--right there in the store on the back.

JONES: Oh, I see. As you went in the store it's on the right. I believe the superintendent's house is just about opposite the store on the east side of the track.

SLAVEN: No. You come down the railroad. There is a road there, railroad either one you want to call it, you come down about 500 feet or more and the superintendent's house was on the right of the railroad.

JONES: Up on the hill, I found a house out there yesterday that had a partial basement. Could that have been the superintendent's house?

SLAVEN: I guess it was because we had a furnace. It was a small, small place. It wasn't big enough for a coal furnace. Tha was the superintendent's house.

JONES: Could you describe the layout of that house?

SLAVEN: It was two-story house, and there's four rooms and a bath downstairs and two rooms upstairs.

JONES: I understand there was some springs up the hill that produced good water. Were the houses piped for water?

SLAVEN: That's right. All the houses had water. Some come from across the river and some--where they called the scout camp used to be on up the mountain to what they called the Devil's Jump--there was a scout camp used to be there. Well, now

that water was piped from across the river. It come across there and used to be water up there them scouts got water and come on down and piped into the houses that were used and in the shop for the men to drink but water for the bath-houses was pumped out of the river.

JONES: That accounts for that big four or six-inch steel pipe coming from the river.

SLAVEN: That's right.

JONES: Was there indoor plumbing in that house? Was that on the first or second floor?

SLAVEN: That was on the first floor. There was no plumbing on the second floor.

JONES: If we reconstruct this, we'll probably use the superintendent's house for the quarters and so that's why I'm so particular of what was there. When you went in the front door, did you have a porch across the house?

SLAVEN: Yes. We had a porch and screened in, went into the house.

JONES: Did it extend the full width of the house? Would you by any chance have any photographs of the house?

SLAVEN: I don't reckon have that. But I might find one. Luke Leadbetter's wife might have one. I tell you what, some of these days when I feel right. I have a old heart that ain't no good and I can't do a lot but some day when you want and I felt all right I wouldn't care bit to go down there to show you everything.

JONES: That would be fine. I sure would appreciate it.

SLAVEN: We could walk up that track. There may be a road that goes up there now.

JONES: There is a road that runs right along the side of the railroad track. You know as you come in to the area you make a sharp turn, to the right there is a plate girder bridge.

SLAVEN: That's right. That's where the train comes across. They go up there and get the coal.

JONES: Well, from that point on down to the tipple, the road runs between the railroad and the river, right adjacent to it.

SLAVEN: And eight houses all along. I could show you practically all the houses was up through there all along there and there are about two houses up on the left of the road up through there. I would be glad to go down there sometime when I felt like it and just show you. But somebody told me they grade the road and fixed some way up through there so you could get up to the jumps [Devil's Jump].

JONES: Yes, you can.

SLAVEN: The tram road went right out up there and went on to what I was talking about. It's not a long ways there what we call One North where this mine. What I'm telling you that one mine was never robbed and that could be fixed where you could see people that go in to that, I' say.

JONES: I tried to locate you two days ago and I wasn't able to find your house exactly and--well, no, they gave me the wrong directions. Do you know Buck Bradley? The town marshal here in Stearns?

SLAVEN: Well, I'm not acquainted with him but I know him.

JONES: Well, he took me up there yesterday and I wish you could have gone with us. You think you could make it on a jeep?

SLAVEN: Well, yes. I drive a truck. I can't do a lot of hill climbing.

JONES: No, I don't want you to do that.

SLAVEN: Just drive around. I could do that. Or just stay down at the railroad. I could walk up to the house where we used to live or something and talk about that and show things like that. And if that road goes on up to this mine up on north, I could talk about that.

JONES: You can drive up about--there were three or four shafts back into the hills, then the road washed out just beyond the last one.

SLAVEN: Well, this mine I'm telling you about I'm a thinking--if you remember up there we dumped a lot of slate. Up there right on this curve back this side where we had a slate dump there was two openings on up there that were never robbed. That mine wasn't. That mine cuts through now and goes plum through that heel and comes out on the other side.

JONES: Oh, is that right? The number of that is . . ?

SLAVEN: One North.

JONES: The only house I was able to locate up there was the superintendent's house. I gather that the houses that were constructed between the railroad and the river were not really a permanent type of house.

SLAVEN: No. They wasn't.

JONES: They were standing on piers and below high waters?

SLAVEN: Washed them off--torn them down. Of course the company sold a lot of them.

JONES: There's nothing there, but a pile of rubble and that's it. And I know while I was there people in there hauling off steel rails whatever they could drag out. Beautiful timbers up there. Twelve by sixteen, gosh they would cost you a fortune.

SLAVEN: That used to be a good camp. They run a lot of coal there. I could tell you across the river all we worked out on marble mine but one little opening on the west side. It was down very small coal. We just quit and pulled out; we didn't have nothing left there.

JONES: How many people were employed out there, Mr. Slaven?

SLAVEN: I'd say when we was full production there was about 125 or 130 men.

JONES: Well, the mine had no boarding house or any quarters like that.

SLAVEN: No. All of them were there. They go and come. They lived out here and drive their cars back or to down that road. That's the way it was.

JONES: I was going to ask you about the church. The church is south of the tipple.

SLAVEN: That's right. You see now where the last time you could see the old concrete forms and that's where the church was. There was a basement there, big furnace there.

JONES: Well, there's a concrete slab laying there now and pretty well broken up. I suppose from the flooding.

SLAVEN: Yes, used to be some concrete steps. I don't know how many. It was built up pretty high and then this basement down there. I don't know how many steps there was that went to the level of the floor--concrete steps.

JONES: I didn't see any steps.

SLAVEN: All that river got up there and washed all that stuff out. I haven't been there for a long time.

JONES: So, then there is a total of three houses uphill that could be reconstructed. Did two cables extend uphill from the tipple? I guess to a dead man on the hill.

SLAVEN: Right. That's where it's anchored in there. But it used to be an incline just past the shop up there with a drum in there and an electric motor. We let cars go up the hill to pull the supply up that hill. So steep we couldn't get up there.

JONES: When you come off the tipple, the shop would be to the left, the sandhouse would be almost in front of you.

SLAVEN: When you come toward the east. That's right. The shop is on the left built right in this tipple, switches laid right there. Right on this structure here, go into the shop and go on out there and shop is right there where we repaired the cars. Switch went in there to switch cars into the car shops. The sandhouse then went above it. This was the main tram road down there by the shop and then there was another supply track we called it where the motors run around empty. They would come in dumped their cars and back them up there and go around and get in there and pull them up again in the mines.

JONES: Now this tram road--that ran south from the tipple, around to these other mines and the slate dump. Wasn't there a railroad going . . .

SLAVEN: The railroad come up above the tipple. Oh, quite a ways there. There was a railroad where the engines come in where the railroad would pull them all up there and back them into the tipple. We could make four grades of coal in cars on every track. We have to pull back up there.

JONES: On the tram road--the motor power there was electric, wasn't it?

SLAVEN: That's right.

JONES: These were donkey-type engines, I suppose you call them, motors. The operator sat on the motor and pulled the cars.

SLAVEN: That's right. We had 10-ton motors and we had 6-ton motors. The 10-ton motors what we call tram motors--they're the ones that trammed the coal from the mines. The little motors went inside--they gathered it up and brought it down to the tram and then on to the tipple.

JONES: You had a different motor power in the mine.

SLAVEN: That's right. They went inside. It was very low. They could go under these low tops, you see, and these tram motors we just let them go to the drift mouth, big part of the time and they pick up these loads and bring them to the tipple.

JONES: Did you ever lose any men over there?

SLAVEN: Yes.

JONES: Any cave-ins?

SLAVEN: While I was there, there were two men killed on what we called the Camarble Mine.

JONES: Is that across the river?

SLAVEN: Across the river on the west side, going back down on the river there's the Camarble Mine. You across the river, this Tram Road went down the river, cross what we called the Devil Creek and on up into the Camarble Mine. I had two men killed while I was there. Both on rock falls.

JONES: Could you describe how you would mine the coal? There's certain shafts I guess, where you go down the elevator and certain sloping shafts. What type of mine . . .

SLAVEN: Now, we call them mines down there drift mouths. That's where you just go into the side of the hill from the track and just grade up to it and go into it. That's what we call drift mouths. Now this mine we got here now--it goes into the slope where the coal comes out and over there where the men goes in and out they have a shaft down there. We didn't have none of that down there.

JONES: You just went straight in there.

SLAVEN: That's right. We called it a drift mouth. It just went straight into the hill.

JONES: Of the 100 men that were employed, most were employed in the mine itself, rather than on the tipple?

SLAVEN: That's right. We worked about, oh I say, 8 or 10 men sometime on tipple. Usually about 8 men on the tipple. We had a blacksmith and the two car shop men and that's about all worked outside.

JONES: I noticed on the tipple the cars come in on the upper level about a third-floor level and there's some hoppers. First is the weighing platforms. This is a little platform about 10-12 feet long.

SLAVEN: That's where the cars were waiting out back where the men used to load by the ton. But after then we went to mechanical mining why then there wasn't more coal weight bin. They just brought it in and dumped here.

JONES: What happened, you brought a car into the tipple and then?

SLAVEN: The coal was brought there and when the men loaded it by the ton it was weighed, but after it went mechanical mining, of course, everything was by shift work we didn't weight it. It was dumped down in this bin and when it's dumped down in this bin we had what we call shakers on it. It was shaking this coal, shook out of the bin and graders were made. We had egg coal, block coal, if you want to make 8-inch or 6-inch block or whatever you wanted to make, or egg coal or steam coal. It all went into that tipple and was sized down below. There were men working on these boom then, picking out this dirt. That's why we use that 8 or 10 men on the tipple to take out the dirt.

JONES: Then it went down to--after it came out of the grader, the shaker--it went into conveyor.

SLAVEN: It went on to a boom, we called it. The men sat on them booms and picked the dirt out and that boom carried that coal down into the railroad cars.

JONES: How many gondolas could you load at one time?

SLAVEN: We could load--we could--we would make stoker coal and steam coal slack. We could make block coal. We could load, I'd say, five different kinds of coal at once.

JONES: Coal came down a chute but underneath the tipple, it looked like great big pipe, round pipe that comes down. Was that supplying water for the locomotives? Do you remember?

SLAVEN: I don't remember about that. I was there but don't remember.

JONES: Could you tell me anything else about the mine, the operation?

SLAVEN: There isn't anything else more that I could tell you but like I told you these mines on up this river--that tram road on the east side of the river--it went up to what we called Blair's Creek. We went in on there and worked that mine. That coal squeezed out and we robbed the mine and come back in that was called the Long Tunnel and we robbed that. Come back down to Barthel Mine and went in there as far down as we could and robbed it, brought it out so that there would be no chance getting back in them old mine.

JONES: The Bartel Mine, that is across Paunch Creek?

SLAVEN: That's right.

JONES: That's across Paunch Creek which is really north of the Blue Heron.

SLAVEN: That's right--when you get down at the foot of this mountain you're going down to Mine 18 you go over an awful steep hill. You get at the foot of the hill, if you notice there's a road that turns to the right. That road goes right around the Bartel Mine.

JONES: We went up there yesterday and all that's left of the old tipple there is a steel work. Nothing else.

SLAVEN: Right. Nothing else there. What happened with that mine there. They cut that through from Mine 18 and took all that coal out. That tipple burned down. They took that coal and cut a hole through and took it out of Mine 18. So that--there's a lot of coal in the Barthel Mine. You could have gone all around where there's this drift goes into this Bartel Mine.

JONES: We didn't go in--just where the tipple was.

SLAVEN: Yeah, well, you could have gone in right around the hill there you could come around where the drift mouth where they brought the coal out and where they went in.

JONES: I noticed that near the Barthel Mine, just south of where the tipple was, I found four old wooden pipes, bringing water out of the hills.

SLAVEN: I don't remember. Somebody must have put them there.

JONES: I thought it probably had something to do with the mine. I was wondering if you ever used wood pipes instead of steel pipes.

SLAVEN: We had some wooden pipe but it never proved successful. It would get overloaded with water and had to jerk them apart. I finally came to use concrete pipes. It would come in 6-foot lengths. We had 4-inch pipes and 6-inch pipes. And finally we done away with that, went to plastic. We used to use wooden pipes way back yonder years ago. I couldn't tell you when. We did have wooden pipes that we used. Now this No. 2 coal. It had a lot of acid in it and beat up this ordinary iron pipes. I would put fittings in the pump and go back in the morning and beat it out.

JONES: Is No. 2 coal the second grade coal?

SLAVEN: That's right, No. 1 is the best grade and then they have got 1-1/2 and then they got No. 2 coal. That just about all I can tell you about it, I mean but I can go down there sometime when I felt like it some pretty day and I could show you a lot more than I can take.

MR. LEMMIE WRIGHT INTERVIEW

APRIL 18, 1975

STEARNS, KENTUCKY

JONES: What is your name and what was your position with the Blue Heron Mine?

WRIGHT: My name is Lemmie Wright. I was the first superintendent of the Blue Heron Mine. I started to work there in 1938.

JONES: 1938, that was the year the Blue Heron started operation. Tell me about the mine at that time.

WRIGHT: Well, when we first went there, we only had three new houses but then come spring and they began bringing these other houses in.

JONES: These houses that were there when you arrived, what were they?

WRIGHT: They was good houses.

JONES: Was the superintendent's house there?

WRIGHT: No, no, we didn't have a superintendent's house then. There were three four-room house pantry, and porches on them. Two porches one on the back and one on the front.

JONES: Where were they located?

WRIGHT: They were located on the hill up above the tipple on the left.

JONES: Before you get to the tipple.

WRIGHT: Yes, just before you get to the tipple. There's three of them there.

JONES: They were four-room houses?

WRIGHT: Two proches? Yes, a porch on the kitchen front, and then one on the front of the house.

JONES: How was the roof? Was it gabled roof, was it a hip roof?

WRIGHT: Gable.

JONES: The porch roof, was it shed-type? How about chimneys?

WRIGHT: Yes. Didn't have any chimneys.

JONES: No chimneys?

WRIGHT: No, no, we had flues see in the center of the house, right in the center of the house and heap of stoves. There were 22 in all, there's two after you cross the railroad before you get going in before you get to the railroad, there's two houses there. One on the lower side of the road, one on the left.

JONES: I see.

WRIGHT: Then there's 20 on up.

JONES: When you are talking about crossing the railroad, you mean that close to the plate girder bridge.

WRIGHT: That bridge. It has two houses there just before you got to the bridge.

JONES: One on each side.

WRIGHT: Yes, and then when they brought these houses in they built them up they made pretty nice houses out there, and four-roomed houses, porches on them and then we had a little old house there, an ore house. I wanted a church and a Sunday School started. We fixed it up, and organized us a Sunday School. Well then when we got the mine started, I told the man, I said I want to build a church house. He said alright, so I got them all to sign the papers and we done a lot of work on it ourselves. I gave a lot of money on it. But it's the first church house I ever had that belonged to the church for many years. I joined the church when I was seventeen years old, and we met in school houses all our lives and I wanted one we could call our own. So we built it and so we built a nice one, about a $10,000 building at that time. Now it would cost you $20,000 to $25,000.

JONES: Well, Mr. Wright where was this church located?

WRIGHT: Up above the tipple. In the bottom, you will see the concrete where the river shoved it up.

JONES: Yes.

WRIGHT: But then what happened, I underestimated that river. I never would have put it there, I would have put it on the hill. But it's so nice there to have the cars park there.

JONES: It's a beautiful spot.

WRIGHT: We moved all the weeds, white-washed these trees about five feet high, and we made it look mighty nice. We paid the house, all but $2,800 I told the superintendent and he cut me off. I said you got you a nice church house. All you need to do is finish paying for it. They had a good furnace in it, paid about $800 for it and so we had it all nice but he never did pay for it. But then they tore it down, sold it, tore it down moved it.

JONES: Can you describe the church? What were the walls, outside walls?

WRIGHT: It had a concrete basement and first floor. It was a frame building. We had Sunday School rooms underneath. When you went in, I built it to suit myself, I designed it. It was 48 feet long and 30 feet wide. As you went in the door here, there was a swinging door. You turn to the left, you hung your coat and hat up, another swinging door led you right out to the church house. Then when you come out of this church, you got your hat and coat.

JONES: Was there a choir?

WRIGHT: No choir.

JONES: Can you give me an idea where the store was located and about what it looked like?

WRIGHT: Yes. It was north of the tipple.

JONES: Between the railroad track and the river?

WRIGHT: That's right.

JONES: Do you remember the size of it?

WRIGHT: No, but it was a pretty good size building. You see we had a timekeeper in there, he had an office and also we had a store.

JONES: Can you describe the layout out of the store? Did it have a porch across the . . .

WRIGHT: Yes, they had a porch.

JONES: Did the porch have a shed roof?

WRIGHT: Yes.

JONES: It was made out of weatherboarding?

WRIGHT: Yes, just an old box house.

JONES: I see.

WRIGHT: In other words it was there before, I had asked them to put a store down there, and Bob Stearns came down and looked at it. It had a store manager. He didn't want to put one there on account of the coal dust. The coal dust was flying from the tipple all the time. Bob said we will put you one in.

JONES: Well now, the door to the store, was that about in the center of the long side?

WRIGHT: In front they had a porch on it, the door went in the store. Then also, they had a back door.

JONES: Where was the office where the timekeeper worked?

WRIGHT: The office was on towards the river from the store, between the store and the river.

JONES: That was kind of a little room built on?

WRIGHT: It was built to it, same building.

JONES: Within the wall.

WRIGHT: Yes, same thing. The building had been a four-room house. They converted it into a store.

JONES: Did you have a counter in the store?

WRIGHT: Yes, they had counters.

JONES: Do you remember how the interior was finished? Was it plaster board or was it wood?

WRIGHT: I think it was just wood. I don't think they had plaster in the store.

JONES: Now, you go down toward the bridge that we talked about, where you cross the railroad tracks. How many houses were along from the store down to the bridge?

WRIGHT: Well, I would say we had one, I said there was 22 houses, we had one above the bridge, a dwelling house way on up, way up and then we had 19, they had these three that I was telling you about. Then my house, that would have been four and then the rest of them were on the lower side of the railroad there and the bridge.

JONES: They weren't on block foundation or anything like that, kind of on blocks of wood, piers?

WRIGHT: They just had posts.

JONES: When the river rose, it flooded them out I guess.

WRIGHT: Yes.

JONES: Can you describe the houses on the upper side of the hill?

WRIGHT: That's what I want to tell you, my house was built on the little bank, you can see them little concrete steps going to it.

JONES: They are still there.

WRIGHT: It was a six-room house. I lived in one of the other houses. There were three up there beside the hill. I lived in one of them, 'till John come there, my brother. He's general mine superintendent. And he asked Lem, where do you want your house built? So they are going to build you a house. I said let's go down there. That big rock there is awful beautiful rock.

JONES: That is a lovely spot for a house.

WRIGHT: They used to hold church on top that rock.

JONES: They did?

WRIGHT: Before they ever built the church house . . .

JONES: Now, that was a six-room house. Was it one or two stories?

WRIGHT: Two stories.

JONES: How many rooms downstairs?

WRIGHT: Four down and two up and the bathroom on the first floor.

JONES: Now, how about the other three houses on that side?

WRIGHT: They were just four-room houses.

JONES: Just four room but they also had a porch.

WRIGHT: Had a porch on the kitchen and a porch on the front.

JONES: Now by the front you mean the side facing the river?

WRIGHT: That's it.

JONES: The kitchen porch was on the opposite side?

WRIGHT: The porch on the opposite side.

JONES: Did they have bathrooms in those?

WRIGHT: No, only had two houses I reckon had bathrooms. I had a bathroom, and there's one down the road, down on the side of the house. I forgot that. That made five on the upper side of the railroad.

JONES: On the upper side of the railroad.

WRIGHT: There is one way down there had a bath.

JONES: Close to the bridge?

WRIGHT: Two bathrooms that I know of in the houses.

JONES: And the other one with the bathroom, was that a four-room house too?

WRIGHT: Yes, it was a four-room house, just a one story.

JONES: Was it on a concrete block foundation?

WRIGHT: It was also on piers like the others.

JONES: All of them except your house?

WRIGHT: Yes.

JONES: Can you describe the bathhouse?

WRIGHT: Well, the bathhouse was built--it was a plaster house.

JONES: It was concrete up about waist high, wasn't it?

WRIGHT: Yes, I think it was, but then it's concrete floor.

JONES: Yes, that's right.

WRIGHT: That's the reason why they had to concrete it up.

JONES: What was in the bathhouse? How many rooms did it have?

WRIGHT: It only had two rooms. See, other words we built one for the bosses, we put two showers in there for the bosses. Restrooms, I forgot that, but then the big end was for the miners. See what we done, we built this house, at one time I had 12 foremen. Well, of course when we all got together they had questions they wanted to ask me and I wanted to ask them so I'm going to tell them and talk to them what some fellow told me about something. We could talk together and the miners couldn't hear us so we could have our conversation while we were taking a bath. Well there were just two rooms to it but then they had a boiler room down below it next to the railroad.

JONES: Down towards to the railroad?

WRIGHT: Yes, that's where we heat the water and then we had a big tank upon the hill for the water we pumped out of the river, we didn'thave enough from off the hill to do. We pumped it out of the river and then use it for the bathhouse.

JONES: Now, in the bathhouse or at least what I thought was a bathhouse as it was built of concrete, I found some little batteries about inch and a half square and about eight inches long. Were they for the miners' lamps?

WRIGHT: Yes.

JONES: Why were there so many of them at the bathhouse?

WRIGHT: That's where they were recharged in one room you see, next to the tipple. You see, these battery lamps had three batteries in them and they had to have acid put in them every now and then you add water and they had to be charged.

JONES: That's where I found them. Do you remember what kind of outside walls the bathhouse had?

WRIGHT: I think it was just boards.

JONES: Was the roof tin?

WRIGHT: I don't know that, I just couldn't say about that. It's been so long.

JONES: As you come out of the back of the tipple, it looks like a trestle that curves to the north and it looks like the track ended in the mine mouth. Was that a mine or was that something else?

WRIGHT: I don't understand what you mean but I'm going to tell about the layout of the mines.

JONES: OK, fine.

WRIGHT: Behind the shop, we first opened that up when I went there I had about 5-6 feet of coal, No. 1 coal.

JONES: I see, at that spot.

WRIGHT: I drove in there a long ways but the coal finally gave out. These motors, we had two ten-ton motors and they come over with a full forty-car strip.

JONES: I see.

WRIGHT: Then we had two tracks that they shoved these empties right up the main line. Then they cut loose and run around the hill where there and got on the other end and pulled them.

JONES: Was that taking the coal from across the river or was it taking it from the east side?

WRIGHT: Bringing it from the east side. When it was coming from the west side of course he didn't have to back up there, all he had to do was to dump and then they backed them up, he shoved them across the bridge. I had over there. Then he got in front of them and pulled.

JONES: The shop, what did it look like?

WRIGHT: It was a long building on 7 x 9s. We had some supplies there for the machines, motors, then we had a place to repair the machines and motors.

JONES: I saw a pit there.

WRIGHT: We had a dandy shop, it was on 7 x 9 post.

JONES: I see. It was kind of a shed more than a building enclosed.

WRIGHT: It was closed in alright, six, seven feet high. So we used that for a shop, course we had a dandy shop, we could make anything.

JONES: You had a blacksmith?

WRIGHT: We had a machine in there that sharpened bits and then we had a thing that sharpened jackhammer bits.

JONES: The sandhouse, what was it like?

WRIGHT: That was a concrete house I built that, see what I done, we had to go there when you unloaded sand and shoveled sand in the sand-house to dry, well, what I done, I went up on the hill here I come around with tracks and I went up where I could dump the sand in the sandhouse and I built this stove so I could get it dried out. It dried itself, had a screen there, that sifted the sand.

JONES: Then you took this sand out down below there and used it with the engines?

WRIGHT: Used that for the motors, see what we had to have, other words we had lots hills and we were coming off this side now, all that ten-ton motor would hold was 40 then you had to have sand on both rails. A man had to know his business to keep it from running away. So, we had a passing point up there, and you see, we fixed it with a swing pole here so that we never had to throw a switch.

JONES: I see, you just ran through and the switch operated. All those operations carrying the coal from the mine to the tipple was with electric motors. I would say then you had a trolley?

WRIGHT: We had a trolley, and a feeder line 5,000 volt feeder line right above the trolley.

JONES: Now the trolley, was it a cable or was it a rod?

WRIGHT: It was a wire that clamped, it had a groove in it, it's what you call a zig-zag wire and that cleared off the line above it. They had this cable I was telling you about on top with a double clamp, it went right on top of this trolley.

JONES: Well, actually then, everything at the mine including the transportation was electrically operated?

WRIGHT: That's right.

JONES: After the gondolas were loaded at the tipple, were they moved into Stearns by steam locomotive?

WRIGHT: Yes, steam locomotive.

JONES: How many mines were there on the east side of the river, not necessarily operating at the same time but at various times?

WRIGHT: Well, they were what you call a backup would be one. Then we had a short one out there that run out that would be two. Then there was No. 1 hole, then we had to go to No. 2 hole and we had one, two, three, we had about five I guess.

JONES: I noticed upriver from the tipple something that looked like a slate dump. Where did that slate come from?

WRIGHT: A lot of that slate come form Tamargo, that was on the west side. You see, in other words we had slate over there that we dumped but then we took some up the river and dumped. A lot of it came out of Barthel too. Eight west, cut through the Barthel.

JONES: Do you remember how many mines you had on the west side of the river?

WRIGHT: We had one.

JONES: That was directly across from the tipple.

WRIGHT: That's right. Then we had a little further round, they had another that didn't go but little piece then run out. That was three.

JONES: Was that to the south of the bridge?

WRIGHT: Yes, that's down north of the bridge, down this way, so then we went on around to Tamargo, old Tamargo, they'd robbed the No. 1 coal. We went in there and robbed that No. 1 coal first, and then we went up and went around the hill that went up to the No. 2 coal.

JONES: I see.

WRIGHT: Then we went in there so we had five on that side, on the river down. Then up the river now, there was Three West, lord I don't know we had four, five others opened up. We had joy loaders on the last you see.

JONES: You had what kind of loaders?

WRIGHT: We had joy loaders.

JONES: What are joy loaders?

WRIGHT: Well, joy loader's something just, just loads the coal.

JONES: Oh.

WRIGHT: Men don't load it, it loads itself, then the shuttle car right behind it here, sits here and loads that and when he loads that shuttle car he runs out. You load one in three minutes and then another runs in but we had oh, I don't know, we had four, five, or six up the river but they didn't go in very far, they run down, they run out.

JONES: Now, most of your coal was mined by pick and shovel?

WRIGHT: At the first start we mined for a long time with a pick and a shovel, then we had machines to cut it and then you shoot it down and then load it by hand. But toward the last, they wanted to go to joy loaders so they went to them and cut the hand loading all out.

JONES: Well, joy loading you might say is something like a front-end loader. It just scoops up the coal.

WRIGHT: It drops it's front end down you see, he's got two big arms here and it just rake it in, and a conveyer conveys it right back to the shadow bar.

JONES: These cars that go down in the mine, are they small?

WRIGHT: Well, the cars would hold about five ton. A train of 40 mine cars would load two railroad cars.

JONES: After you got the coal out the mine the mine train was made up and you brought it across the river?

WRIGHT: Yes, the mine cars were scattered all over the whole works, all the time. Course, we usually had a trip a standing there all the time.

JONES: What happens when you bring the coal into the tipple?

WRIGHT: You just pull over and had drop bottom cars. We had a trigger, that raised and that opened your doors and the coal spilled out. A trigger at the far end would close the doors and you just kept moving right along.

JONES: After that coal was dumped from the cars, what happens to it?

WRIGHT: Well, we had at the bottom of the bin a feeder, had a conveyer you see that moved it right up on the shaker.

JONES: What was the purpose of the shaker?

WRIGHT: It sorted the coal.

JONES: What type of coal was mined at the Blue Heron?

WRIGHT: This is soft coal, Pennsylvania has the hard coal.

JONES: What about the burning characteristics, does the soft coal burn easier or faster?

WRIGHT: I couldn't tell you that.

[Appendix D]

ALLEN & GARCIA COMPANY

Consulting & Construction Engineers

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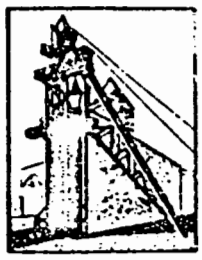

TOP OF THE FIELD

Telephone 312/427-2411

April 30, 1975

Mr. Russell Jones
Historical Preservation Team
Denver Service Center
655 Parfet Street
P.O. Box 25287
Denver, Colorado 80225

Dear Mr. Jones:

Referring to our recent conversation regarding the Stearns Coal & Lumber Coal Preparation Plant which we built about 1937, we are enclosing a roll of prints covering most of the details of this plant.

When you are ready, we will donate the original plant lay-outs, etc. which we think would make an extremely interesting exhibit when framed and mounted under glass.

Please let us know when you would like these tracings.

Meanwhile, we would appreciate being kept informed of the status of this program.

Very truly yours,

ALLEN & GARCIA COMPANY

Paul Levin

Paul Levin
President

PL:rl
Encl.

STATEMENT OF SIGNIFICANCE

As noted in the preface, the objective of this report was to present recommendations and alternatives to fulfill the requirements for restoration of the Blue Heron Mine and community as mandated by the establishing act.

Having fulfilled this requirement, it seems necessary that it go further and provide an evaluation of the complex based on its historic significance and its value to the visitor as a mining exhibit.

Preliminary evaluation of the Blue Heron Mine complex indicates that it is lacking in uniqueness, antiquity, and historical, architectural, or cultural associations, and therefore is not significant in the presentation and interpretation of the history of the nation.

It can hardly be considered significant in the presentation and interpretation of the history of the region or state. At the most it can only be given community or local historic importance.

Even at the peak of its operation the Blue Heron was only typical of the coal mining operation throughout Kentucky and West Virginia. It is reported that in the vicinity there is a mine currently operating in the same manner as the Blue Heron. Unfortunately, this could not be verified during the recent visit to the area because of labor problems in the local mining industry.

At the present time there are only two structures, the tipple and the bridge, remaining in anything resembling original form. Almost all of the sheet metal siding has been removed from the tipple. The railroad rails have been removed from the bridge. The wood fabric of both structures has deteriorated to such a degree that it is unsafe to enter the tipple or cross the bridge. However, the structural steel framework of both are sound, although rusted. The tipple machinery is in fair condition and is relatively complete.

The only remains of the bathhouse and sandhouse are the concrete portions of these buildings, the wood portions having deteriorated or been hauled away for their salvage value. The church has been destroyed by flooding, leaving only the concrete slab floor and basement.

The frame quarters and various miscellaneous buildings have been reduced to rubble by neglect or vandals. No trace of the commissary exists.

The railroad sidings, loading tracks at the tipple, and some of the approach track have been removed, possibly for the salvage value.

The historic significance, the present condition of the remaining fabric, and the high costs of restoration and reconstruction do not seem to justify undertaking the extensive restoration of the Blue Heron Mine complex as proposed by the act establishing the Big South Fork National Recreation Area.

Rather than restore or reconstruct the original buildings for adaptive use or exhibits, it is suggested that any building necessary to the operation of the area be constructed at convenient locations remote from the mine site. The tipple and bridge should be preserved with the steelwork being given a preservative treatment to halt further deterioration; all wood stairs and walkways should be repaired or replaced and handrails installed to provide the visitor with safe access. The site should be cleared of debris and developed as a day-use area. All mine openings should be barricaded to prevent public entrance.

For those visitors interested in mining, an exhibit providing full information on the Blue Heron, its construction, existence, and operation, would be installed in the contact station. The original construction drawings for the tipple and bridge would be included in the exhibit.